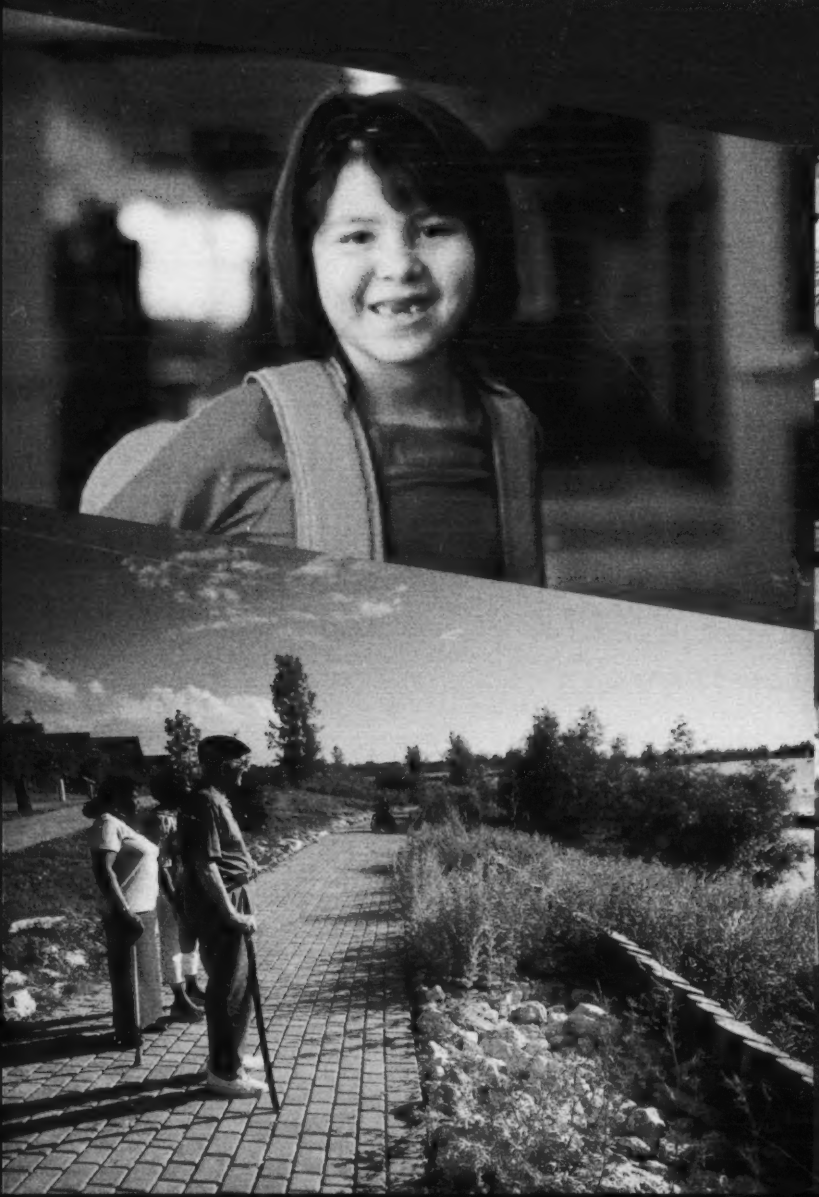
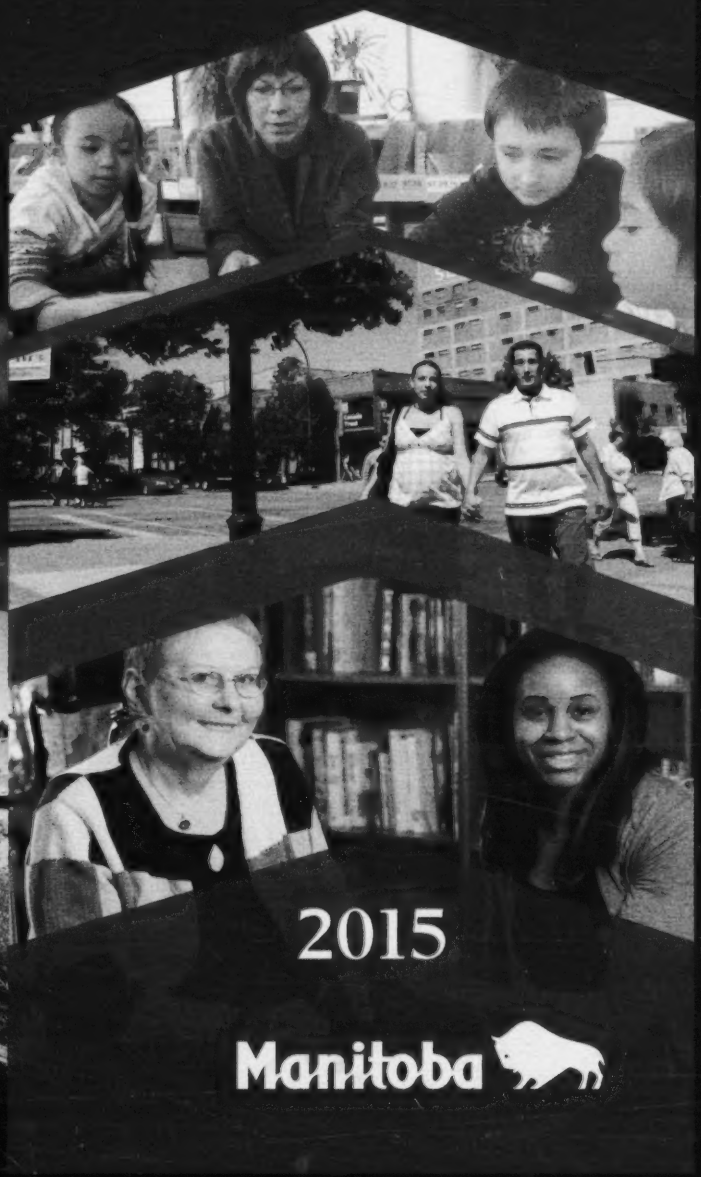
MANITOBA
BUREAU OF STATISTICS

Impacts of **Demographic Change** *on Manitoba*





2015

Manitoba

Impacts of

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MBS REPORT 3A12
PRICE: $50

January 18, 2016

Acknowledgements:

This publication will inevitably be met with the simple question of "Why?" The answer, a bit longer than a single word, is to provoke thought in long-term strategic thinking and considerations. The Province of Manitoba's demographics are unique in Canada and changing. In order to face the challenges this change will bring, we must understand what the province's demographic make-up will look like in the decades to come.

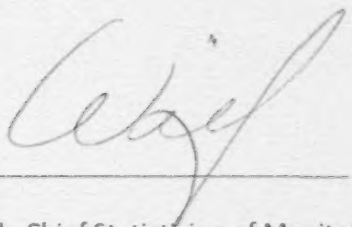
This project would not have been possible without the efforts and flexibility as the paper took form of the following people: **Tara Newton** (Population); **Melissa Luff** and **Mostofa Sarkar** (Labour Market & Social Indicators); **David Desrochers** and **Michael Wisener** (Economic Performance); and **Don Grant** (Fiscal Projections).

David Desrochers and **Tara Newton** have taken additional efforts to ensure that the whole of this publication plus expanded individual sections are available digitally through the inter- and intranet. Thank you.

I also want to express my gratitude to **Stephen Barber**, who has managed and edited this publication, and to **Cam McCullough**, Director of Creative Services at Communications Services Manitoba for his assistance in developing the cover page.

Finally, my thanks to **Probe Research** for the work on the Manitoba Business Leader's Index and the Omnibus Survey, putting a human touch to the impacts of the data.

I hope this publication will stir thought, and bring to light future obstacles and challenges to tackle in the coming decades.



Wilf Falk, Chief Statistician of Manitoba
Manitoba Bureau of Statistics

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There is a New Manitoba "Out There": An Analytical Overview

Manitoba has evolved over the last number of decades

There is a new Manitoba that now exists. It is not what many perceive the province to be, whether they are residents or whether they view Manitoba from afar. The common perception of Manitoba is that it is a province of slow economic growth, slower population growth and that it has a considerably larger share of older individuals than other provinces. These types of views, or criticisms, are relics of the past.

To illustrate Manitoba's evolvement and change, from 1980 to 2015, various analytical approaches can be used. For this overview, a "Decades" analysis technique, using performance comparisons over the 1980's, 1990's, 2000's and 2010's-to-date, was employed. Under this paradigm, Manitoba's total percent change during each decade was calculated. These percent changes were then compared to other provinces and Canada.

The "Comparative Factor" presented in this report is a ratio of the Manitoba growth rate to the Canada growth rate. Sometimes expressed as a percentage, it is indicative of Manitoba's growth in relation to Canada's. A factor of 1, or 100%, implies that Manitoba is on par with Canada, while a larger factor means Manitoba is out-performing Canada and a smaller factor means Manitoba is under-performing, comparatively.

The growth rates, interprovincial ranks and comparative factors of four key indicators were analyzed using the Decades approach: Real Gross Domestic Product (RGDP); Population; Labour Force; and Employment. Each of these indicators shows that Manitoba has improved its placing among the provinces and in comparison to Canada.

Real Gross Domestic Product (RGDP)

RGDP is the value of goods and services produced within in a particular jurisdiction. It is expressed in terms of inflation adjusted levels of economic activity. This enables direct comparisons of growth between various time periods.

Real Gross Domestic Product

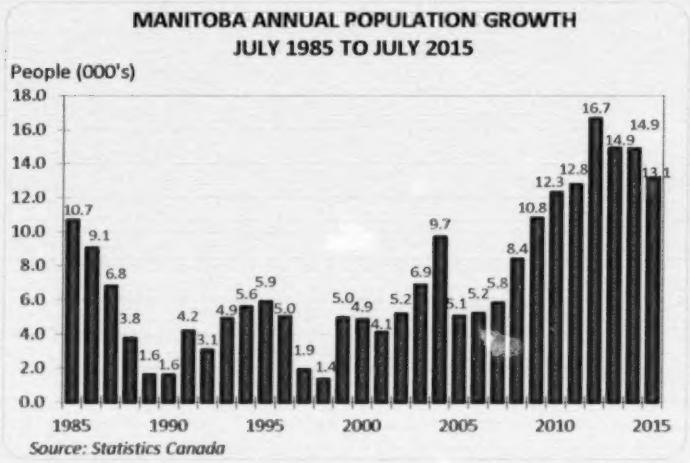
Decade	Manitoba % Growth	Canada % Growth	Manitoba Rank	Comparative Factor
1980's	17.6	25.2	8	0.70
1990's	18.2	26.1	8	0.70
2000's	25.8	22.6	4	1.14
2010's	13.3	13.3	4	1.00

Source: Statistics Canada

During the 1980's and 1990's Manitoba's RGDP growth recorded a comparison factor of 0.70 relative to Canada, or 70%, placing it at the bottom end of the provinces (8th place). In the 2000's, Manitoba improved to the top half of the provinces, in 4th place, exceeding the national growth rate by 14%. This improved positioning and growth has continued so far with the 2010 decade. Manitoba is on par with Canada's growth and remains 4th provincially.

Population

There has been a marked change in Manitoba's population growth. As illustrated in the annual population growth chart, there was a slow growth period in the late 1980's and the 1990's. Population growth started its sustained higher levels in 2008.



Source: Statistics Canada

The Decades analysis confirms the growth weakness of the 1990's. Manitoba's 3.5% population increase ranked 6th among the provinces and had a comparison factor of 0.30, or 30%, relative to the national population increase. The 2000's resulted in a growth rate increase of 2.3 percentage points, moving to 5th place, and improving to 55% of national growth. It can be noted that in the 2000's, the growth rates in Alberta (24.6%), Ontario (13.0%) and British Columbia (10.0%) were the main factors in Canada's growth of 10.6%. In the 2010's, Manitoba's population growth of 7.0% exceeded the national growth of 6.6% and was 3rd highest after Alberta and Saskatchewan.

Population

Decade	Manitoba % Growth	Canada % Growth	Manitoba Rank	Comparative Factor
1980's	6.6	9.9	4	0.67
1990's	3.5	11.5	6	0.30
2000's	5.8	10.6	5	0.55
2010's	7.0	6.6	3	1.06

Source: Statistics Canada

Labour Force

Manitoba's Labour Force growth has achieved improved interprovincial rankings through each decade. Over the 1980's, Manitoba's growth was 15.2%, lower than the national growth rate of 21.8% and 9th provincially. The 1990's saw lower growth across Canada but Manitoba's rank improved to 8th. In the 2000's Manitoba's growth rate was 61% of Canada's and 7th provincially.

Labour Force

Decade	Manitoba % Growth	Canada % Growth	Manitoba Rank	Comparative Factor
1980's	15.2	21.8	9	0.70
1990's	3.6	10.9	8	0.33
2000's	10.4	17.1	7	0.61
2010's	6.4	5.6	3	1.14

Source: Statistics Canada

From 2009 to 2015, Manitoba experienced growth of 6.4%. This was 3rd best among provinces for the decade thus far. Manitoba's growth had a 14% premium over Canada's growth.

Employment

Manitoba's job growth has improved relative to Canada's since the 1990's. For the 2000's, Manitoba's growth rate was 67% of the national growth rate. So far in the 2010's, the relative comparison stands at 81%. This is the best performance for Manitoba, relative to Canada, of the four decades.

Employment

Decade	Manitoba % Growth	Canada % Growth	Manitoba Rank	Comparative Factor
1980's	12.8	21.8	9	0.59
1990's	5.7	10.8	8	0.53
2000's	10.8	16.1	8	0.67
2010's	5.9	7.3	7	0.81

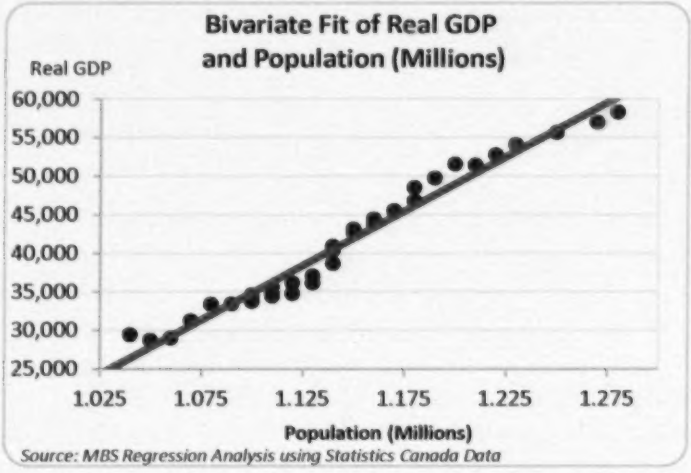
Source: Statistics Canada

Manitoba's interprovincial ranking has undergone slow improvement. Over the 2010's Manitoba achieved 7th place, improving from 8th in the 2000's and 1990's, and 9th in the 1980's.

Explaining Manitoba's improvement

Can one identify what factor(s) might explain Manitoba's economic evolvement over the last number of decades? It turns out the answer is Yes. This factor is Population!

A plotted depiction of Manitoba's annual RGDP levels and Manitoba's corresponding population level is very interesting. The red line represents the estimated linear relationship between RGDP and Population. Using statistical regression analysis, it is evident that the annual changes in Population "explain" nearly 97% of the changes in RGDP.



Source: MBS Regression Analysis using Statistics Canada Data

This regression analysis outcome is not as surprising as it may first appear. Population, and its age, gender and regional structures, impacts nearly all economic and social endeavours in the province. More people imply increased aggregate demand for goods and services, increased labour market activity, and increased income generation, directly impacting the RGDP.

Illustrating Manitoba's changing demographics

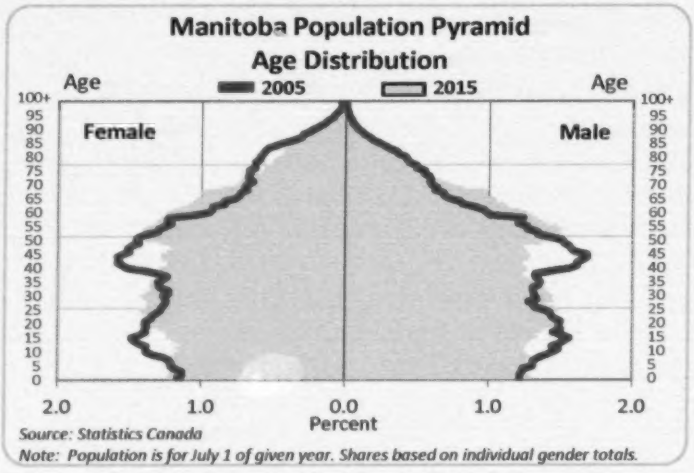
Population change is a major player in determining economic outcomes. Manitoba's demographics have been changing over time. It should also be noted that Manitoba's demographics are different from other provinces and Canada. Demographic changes, occurring

at the national level, are, most likely, not directly applicable to Manitoba. This section highlights changes in Manitoba's demographics and contrasts them with the rest of Canada.

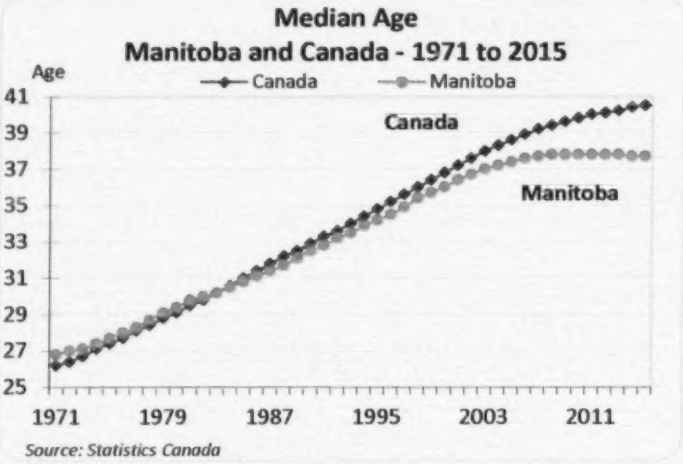
Manitoba's Age and Gender structure continues to evolve

The overall population grew by 9.8%, between 2005 and 2015, generally implying more persons in the various age and gender groups. However, on a percent distribution basis, there have been changes in the composition of the province's age and gender makeup.

Manitoba's Population Pyramid, comparing the percent shares by single years of age and gender between 2005 and 2015, highlights the changes that have occurred in the last ten years. A Population Pyramid covering a longer time frame would show even larger differences.



Over the last ten years, there was a reduction in the concentration of persons aged 20 and under. This also occurred for males and females aged 40 to 50. The proportion of persons aged 51 to 70 increased over the ten years. Females, aged 71 to 85, had a reduction in their percent share, while the share for males was nearly unchanged. There was very little change for persons 85 and older.



Manitoba's Median Age was 3rd lowest provincially

Changes in Manitoba's age and gender distribution impact its median age. Median age is defined as the age at which 50% of the population is younger and 50% of the population is older. Since 1985, Manitoba's median age has been lower than Canada's. With the start of the 2000's decade, the median age gap increased. Manitoba's median age has not increased since 2009, while Canada's median age increased 0.9 years.

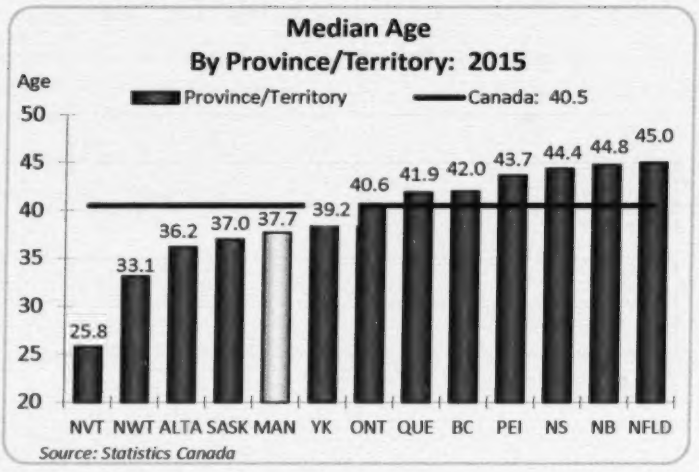
In 2015, Manitoba had the third "youngest" province, with a median age of 37.7 years. Canada's median age was 40.5 years.

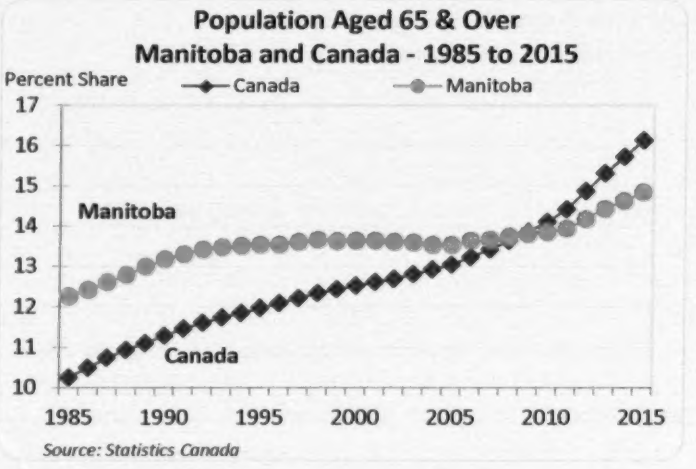
Manitoba's "Older" Population on a different track than Canada's

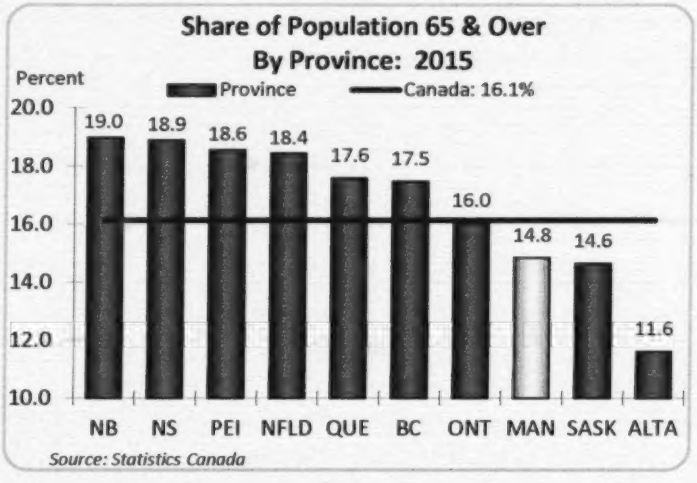
In recent history, there has been considerable adjustment in the percent share of Manitobans 65 years and older in relation to the national share. Back in 1985, Manitoba's share was just over 12%, two percentage points above Canada. This gap narrowed until 2009, when it was negated. Since then, Manitoba has had a lower percent share of persons 65 years and over than Canada. In Manitoba, the share was 14.8% in 2015, below the national share of 16.1%.

At 14.8%, Manitoba's share of persons 65 and over was 3rd lowest among the provinces. Alberta and Saskatchewan had the lowest rates, at 11.6% and 14.6%, respectively. The four Atlantic provinces all had rates above 18%, with New Brunswick having the largest share, at 19.0%.

The 65 and older population group is not homogenous in terms of growth or concentration. One way to look at this group is to consider three categories: Young Seniors (65 to 74); Middle Seniors (75 to 84); and the Most Senior (85 and older). The recent increase in Manitoba's 65 years and over share has been concentrated in the 65 to 74 group, while the share for those aged 75 to 84 has started declining.







Manitoba's Younger population

For the last 28 years, Manitoba has had a larger proportion of persons aged 15 to 24 than Canada. The last 12 years has seen this gap increase.

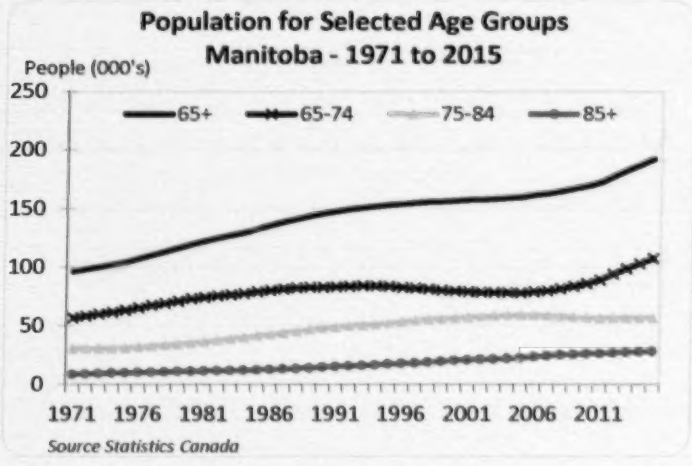
The "youngness" of the province can be seen as a large benefit for our labour market. Those aged 15 to 24 are potential labour market entrants and could replace those 55 to 64 years of age who may be leaving the labour market as they retire.

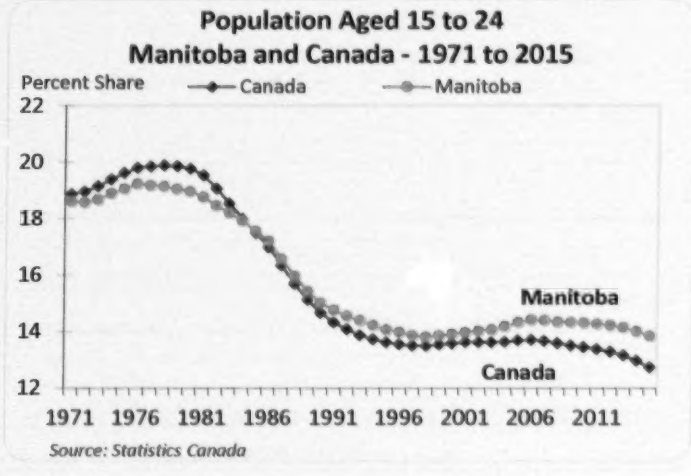
Manitoba's ratio of persons 15 to 24 compared to 55 to 64 year olds was 1.11 in 2015. This was the highest ratio of any province. Canada's ratio was 0.94. There were only three provinces with ratios above the "replacement" level of 1.00. Ontario was exactly 1.00.

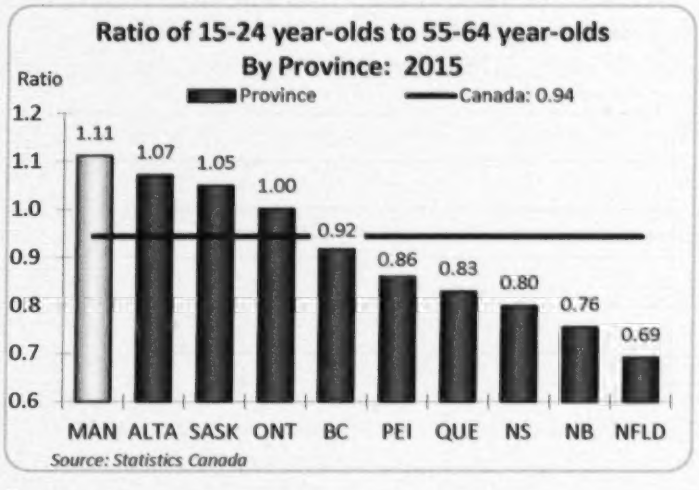
Potential change in Manitoba in the coming years

Population and demographic changes were major players in Manitoba's recent past. What may happen in the future?

The remaining articles in this publication look at projected population growth and demographic changes that will impact the province and its citizens. The objective is to inform readers of these projected changes and what they could imply for different aspects of life and activity in Manitoba.







Population and Demographic Projections

Special population adjustment

The Manitoba Bureau of Statistics (MBS) firmly maintains that due to statistical anomalies in their net undercoverage results, Statistics Canada substantially underestimated Manitoba's 10 May 2011 population. To mitigate this undercount, MBS developed its own series of population estimates by age, gender and economic region, going back to 1 July 2007. This effectively added 16,154 individuals to Statistics Canada's estimate of Manitoba's 1 July 2013 population.

The following sections utilise MBS' adjusted population estimates and are not consistent with Statistics Canada's population estimates.

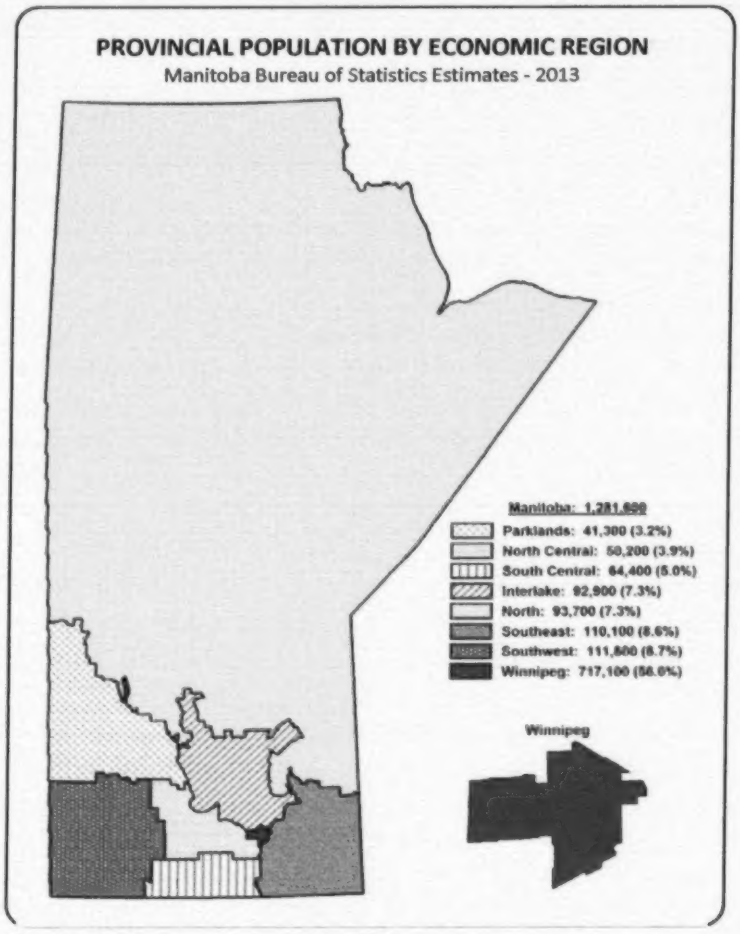
Base population

Manitoba's population on 1 July 2013, including MBS' special population adjustment, is an estimated 1,281,600 persons. This adjusted population is used as the starting point for the most recent set of MBS population and demographic projections.

The Winnipeg Economic Region (ER) consists of the City of Winnipeg and the Rural Municipality of Headingley (see the map to the right). Although the smallest geographically, MBS estimates the majority of Manitobans reside in this region.

The Economic Region of North encompasses most of the province and is home to 7.3% of Manitoba's residents.

The Parklands region is home to the smallest share of Manitoba's population, at 3.2%.



Projections are not forecasts

Projecting population growth and demographic change is not the same as forecasting. A forecast tells what the most likely future will be. A projection, however, attempts to establish plausible scenarios of population growth, based on assumptions made about demographic components such as fertility and mortality rates, as well as migration flows. The resulting projection is what would occur if the stated assumptions were to hold true.

Component assumptions are based on current demographic trends, which will eventually change. Making precise assumptions about the number of immigrants and the flows of people moving between provinces is an especially difficult process, since any number of external factors can easily influence these components. As the process of change is cumulative, the reliability of projections may decrease over time.

Projections are not guarantees. These possible scenarios of population growth are the result of the stated projection assumptions.

Projection assumptions

MBS used its Regional Cohort Component Model to develop three possible futures for the population of Manitoba. The same initial population, incorporating MBS' special adjustment, is used in all three projection scenarios.

The projection scenarios, labelled Low, Medium and High, assume the same constant regional fertility and the same moderate increase in life expectancy at birth. However, MBS developed distinct migration assumptions for each scenario. Identical until 2015, the scenarios begin to diverge the following year.

MANITOBA POPULATION PROJECTION ASSUMPTIONS

Component	By 2015	By 2020		
	All Scenarios	Low	Medium	High
Total Fertility Rate	1.89	1.92	1.92	1.92
Life Expectancy - Male	77.5	78.3	78.3	78.3
Life Expectancy - Female	82.0	82.5	82.5	82.5
Net Interprovincial Migration	-4,700	-5,500	-3,800	-2,400
Net International Migration*	14,700	12,000	14,600	17,500

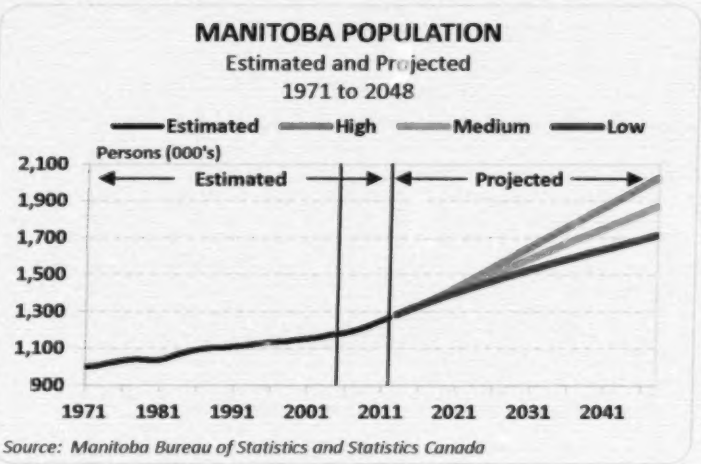
**Immigration less emigration, and net non-permanent residents, plus returning emigrants, less net temporary emigrants.*
Source: Manitoba Bureau of Statistics

MBS assumes the Medium scenario is most likely to occur. The other two scenarios utilise migration assumptions that result in more (High) and less (Low) population for Manitoba.

Manitoba's possible futures

MBS' Medium scenario projects there will be 1,398,500 Manitobans on 1 July 2020. MBS anticipates a total increase of 116,900 individuals from its estimate of 1,281,600 Manitobans on 1 July 2013. This is an average increase of 16,700 persons annually, resulting in an average annual change of 1.3%.

Alternatively, the Low and High scenarios predict average changes of 1.2% and 1.4%, respectively, for the same period.



Source: Manitoba Bureau of Statistics and Statistics Canada

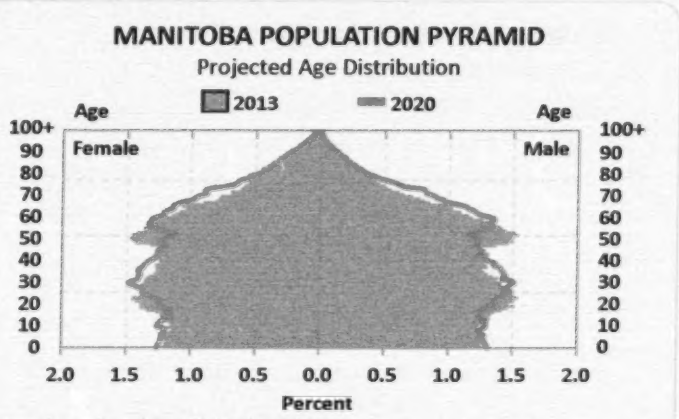
MANITOBA'S POPULATION & MEDIAN AGE BY SCENARIO - ESTIMATED & PROJECTED

Year (July 1)	Population (000's) Low	Population (000's) Medium	Population (000's) High	Median Age (Years) Low	Median Age (Years) Medium	Median Age (Years) High
2011	1,249.9	**1,249.9**	1,249.9	37.8	**37.8**	37.8
2013	1,281.6	**1,281.6**	1,281.6	37.8	**37.8**	37.8
2018	1,361.4	**1,364.0**	1,366.6	37.9	**37.9**	37.8
2020	*1,389.7*	***1,398.5***	*1,407.2*	*38.1*	***38.0***	*37.9*
2023	1,429.1	**1,451.4**	1,473.6	38.5	**38.3**	38.1
2028	1,492.5	**1,539.0**	1,585.0	39.3	**38.9**	38.6

Source: Manitoba Bureau of Statistics - Estimates (2011) and Projections (2013 to 2028)

Manitoba's projected age structure

MBS' Medium scenario projects that the age ranges of 12 and under, 25 to 40 and 57 to 79 will show increases in population share between 1 July 2013 and 1 July 2020. The shares for the age ranges of 13 to 24 and 41 to 56, on the other hand, are expected to show declines over the period. MBS anticipates that the 80 and over age range will show very little change in share.



Note: Shares based on individual gender totals.

Source: Manitoba Bureau of Statistics Projection (Medium Scenario)

MANITOBA PROJECTED POPULATION, SELECTED AGE GROUPS, JULY 1

	14 & Under	15 to 24	25 to 34	35 to 44	45 to 54	55 to 64	65 to 74	75 to 84	85 & Over	Total
2013 ('000s)	237.2	181.7	175.9	163.8	180.7	157.0	99.4	57.0	28.9	1,281.6
2020 ('000s)	262.5	177.3	200.4	185.7	168.9	177.7	130.3	65.0	30.5	1,398.5
2013 (% Share)	18.51	14.18	13.73	12.78	14.10	12.25	7.76	4.45	2.25	100
2020(% Share)	18.77	12.68	14.33	13.28	12.08	12.71	9.32	4.65	2.18	100

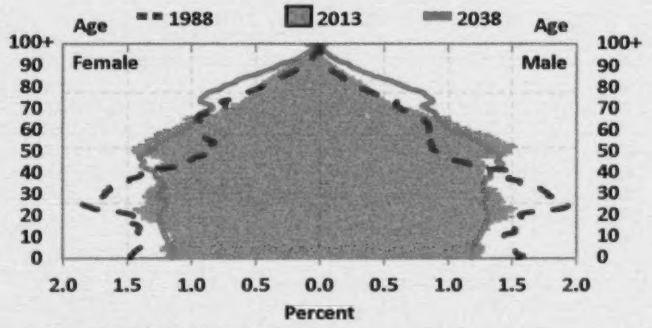
Source: Manitoba Bureau of Statistics Projection (Medium Scenario)

The age group of 41 and under experienced a significant decrease in population share between 1 July 1988 and 1 July 2013. MBS projects the share for this cohort will continue to decrease between 1 July 2013 and 1 July 2038, although at a slower rate.

The cohort of individuals aged 42 to 64 experienced an increase in population share between 1988 and 2013. However, MBS predicts this cohort will undergo a decline in share between 2013 and 2038.

MANITOBA POPULATION PYRAMID

Estimated & Projected Age Distribution



Note: Shares based on individual gender totals.

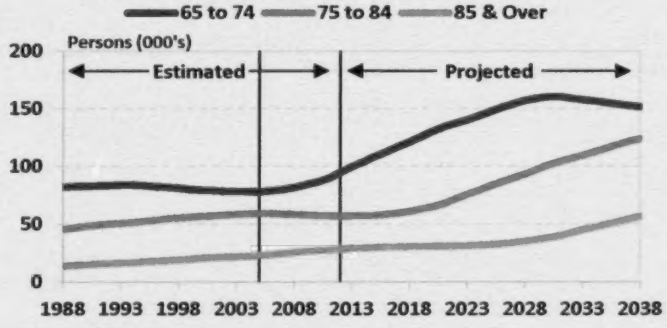
Source: MBS Projection (Medium Scenario) and Statistics Canada

Although relatively stable between 1988 and 2013, the 65 and over age cohort is projected to have an increase in population share between 2013 and 2038.

Examining the 65 and over cohort in more detail, MBS projects the number of Manitobans aged 65 to 74 will increase by 52.2% between 1 July 2013 and 1 July 2038. Over the same period, the 75 to 84 age cohort is expected to increase by 117.2%, while an increase of 96.8% is projected for the age group 85 and over.

POPULATION AGED 65 AND OVER SELECT AGE GROUPS

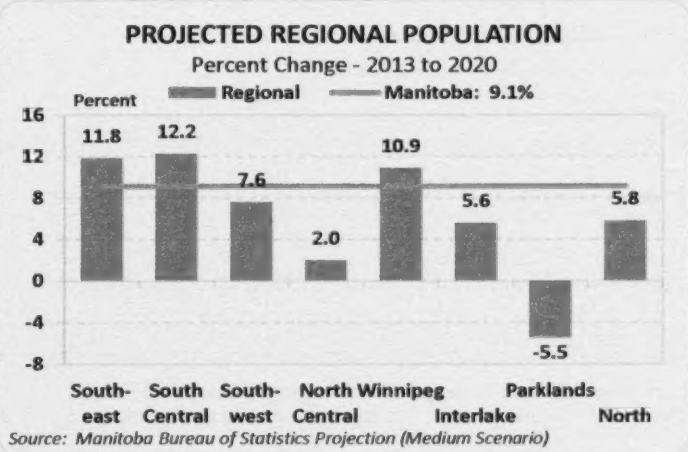
Estimated and Projected, 1988 to 2038



Source: MBS Projection (Medium Scenario) and Statistics Canada

Projected regional population change

MBS projects Manitoba's population will increase by 116,900 individuals between 2013 and 2020, a total gain of 9.1% for the province. The Winnipeg region accounts for almost 67.0% of Manitoba's projected growth, increasing by 78,200 individuals.

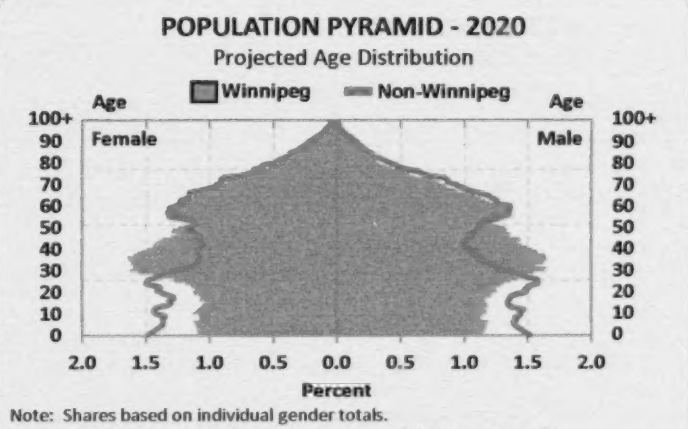


Source: Manitoba Bureau of Statistics Projection (Medium Scenario)

MBS anticipates that the South Central and Southeast regions will have the strongest growth rates, at 12.2% and 11.8% respectively. The Southwest, Interlake and North regions are expected to have moderate growth. The Parklands is the only region projected to show a decline in population, contracting by 5.5%.

Projected regional age structure

The age structure of Manitoba's regions is not the same. Compared to the rest of the province, Winnipeg has a larger proportion of individuals between the ages of 28 and 54, while the cohort of individuals under the age of 28 is considerably smaller.



Note: Shares based on individual gender totals.
Source: Manitoba Bureau of Statistics Projection (Medium Scenario)

These regional differences in age structure reflect Winnipeg's lower fertility rates compared to the rest of Manitoba's regions. Immigration tendencies also have a significant impact. The largest share of Manitoba's immigrants applying under the Provincial Nominee program is between the ages of 25 and 40. Additionally, they are choosing to reside in Winnipeg.

First Nations and Métis Population Projections

Statistics Canada released its *Projections of the Aboriginal Population and Households in Canada, 2011 to 2036* in September 2015. The Manitoba Bureau of Statistics (MBS) has received custom tabulations based on Statistics Canada's Aboriginal Identity classification. Using this concept, Registered Indian status is not a factor in the categorization of individuals self-identifying as First Nations or Métis.

The projection data presented below is from Statistics Canada's Demosim microsimulation model, and is incompatible with MBS' population projections. Numbers may not add to totals due to rounding.

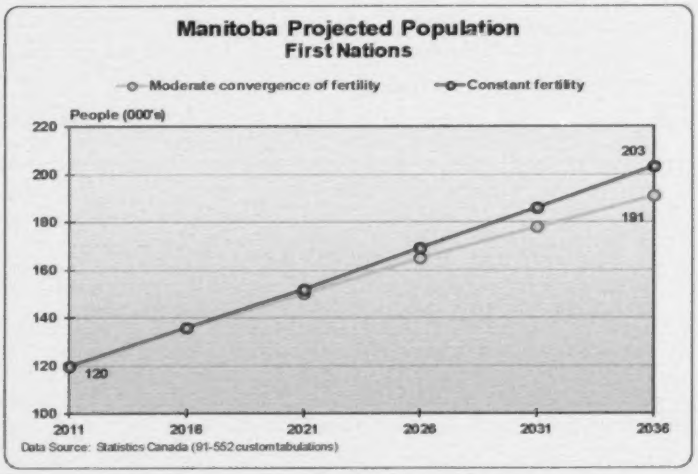
The Scenarios

This section provides results from two of Statistics Canada's five projection scenarios. Specifically, the **Constant Fertility** and **Moderate Convergence of Fertility** scenarios have been highlighted. Each of these scenarios assumes constant intragenerational ethnic mobility and constant internal migration. The Constant Fertility scenario assumes constant probabilities of giving birth for the duration of the projection. However, the Moderate Convergence scenario assumes that by 2036 the gap in fertility between the Aboriginal and non-Aboriginal populations will reduce by 50%.

First Nations Overview

Statistics Canada's Constant Fertility scenario projects that Manitoba's First Nations population will increase from 120 thousand in 2011 to 203 thousand in 2036, gaining 83 thousand individuals.

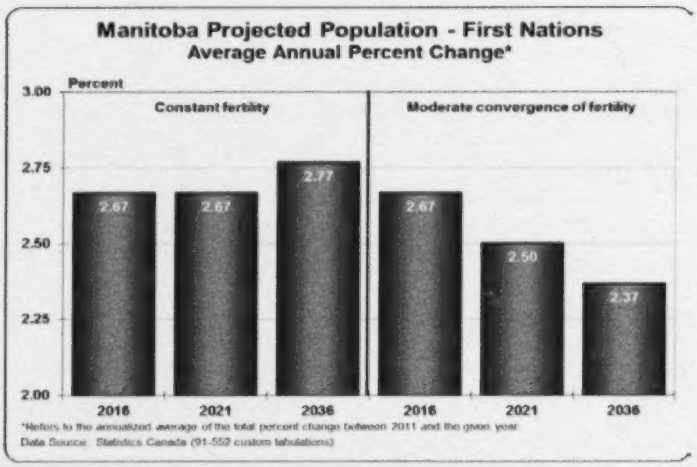
Under the assumptions of Moderate Convergence, Statistics Canada anticipates a population increase of 71 thousand over the projection period.



Starting in 2021, Statistics Canada's assumption of a reduction in Aboriginal fertility begins to have a noticeable impact on the projected population for Manitoba's First Nations. By 2036, there is a projected difference of 12 thousand individuals between the Constant Fertility and Moderate Convergence scenarios.

First Nations Growth Rates

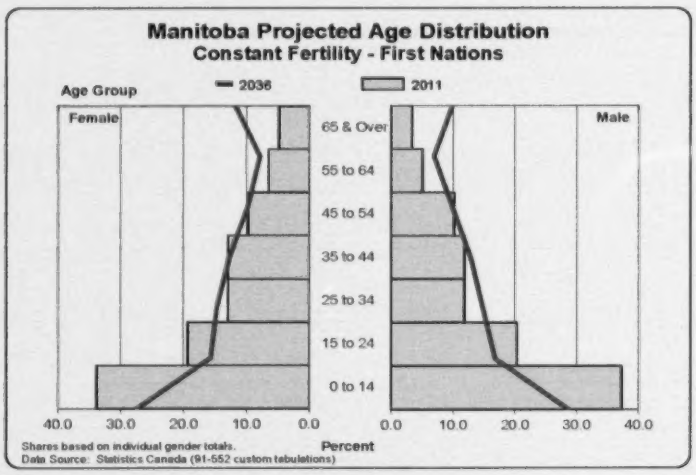
Under the assumptions of the Constant Fertility scenario, Statistics Canada expects Manitoba's First Nations population will increase by an average of 2.77% per year over the duration of the projection. Over the short and medium terms, average annual growth rates of 2.67% are anticipated.



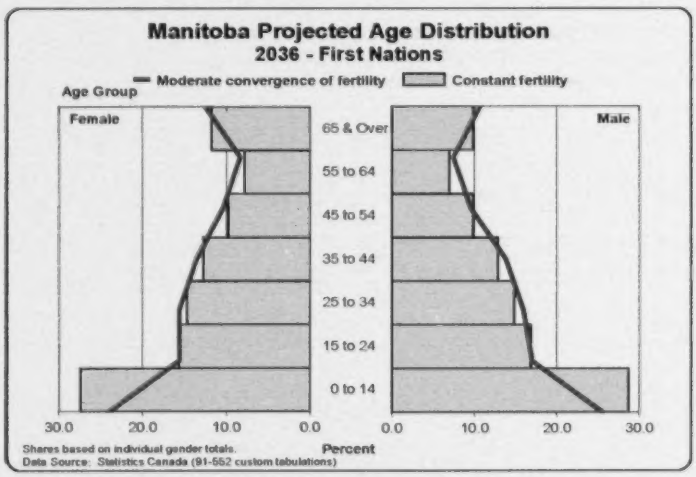
Reflecting the assumption of declining First Nations fertility, the Moderate Convergence scenario shows lower average growth rates than the Constant Fertility scenario, especially as the projection progresses.

First Nations Age Structure

Under the assumptions of the Constant Fertility scenario, Statistics Canada expects that by 2036 there will be a reduction in population share for Manitoba's First Nations individuals aged 0 to 14 and 15 to 24. Moderate increases are projected for the older age groups, with the 65 and over population expected to have the largest gain.

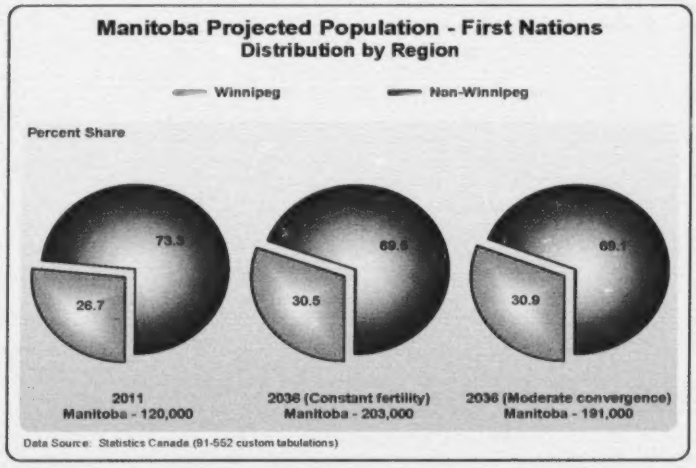


Compared to the Constant Fertility scenario, the Moderate Convergence scenario projects the 0 to 14 age group will contribute just under 3.5 percentage points less to Manitoba's 2036 First Nations population. Influenced only by the reduction in fertility, scenario differences in the older age groups are negligible.



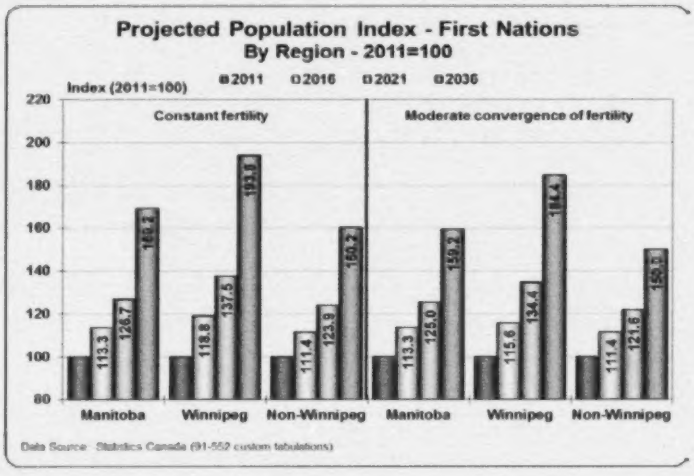
First Nations Regional Growth

In 2011, 26.7% of Manitoba's First Nations population lived in the Census Metropolitan Area (CMA) of Winnipeg. The remaining 73.3% resided outside of Winnipeg.



Both of Statistics Canada's scenarios project increases in the proportion of First Nations residents living within Winnipeg in 2036. The Moderate Convergence scenario expects the largest increase in share, reaching 30.9% for 2036.

Statistics Canada projects that by 2036, Manitoba's First Nations population will experience a total increase of 69.2% under the Constant Fertility scenario. The Moderate Convergence scenario anticipates slightly less growth, at 59.2%.

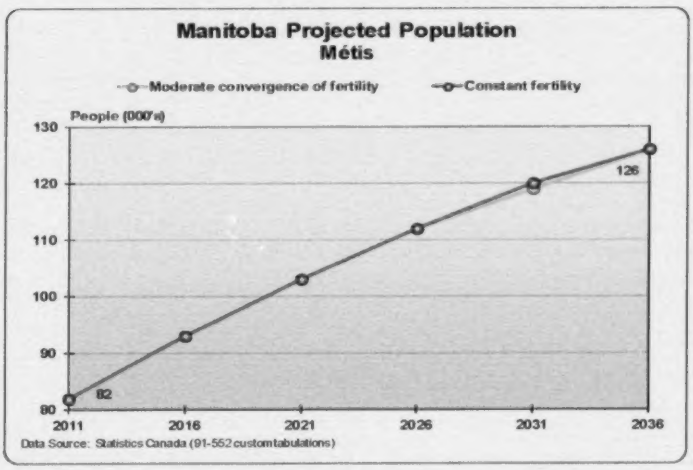


Under the conditions of the Constant Fertility scenario, Winnipeg's First Nations population is expected to nearly double by 2036, increasing by 93.8%. The Moderate Convergence scenario projects an increase of 84.4%.

Both of Statistics Canada's scenarios project that the First Nations population living outside Winnipeg will have lower growth than the population residing within. Under the conditions of the Constant Fertility scenario, Statistics Canada expects the First Nations population living outside Winnipeg will increase 60.2% by 2036. The Moderate Convergence scenario anticipates growth of 50.0% over the projection period.

Métis Overview

Statistics Canada's Constant Fertility scenario projects that Manitoba's Métis population will increase from 82 thousand in 2011 to 126 thousand in 2036, gaining 44 thousand individuals.

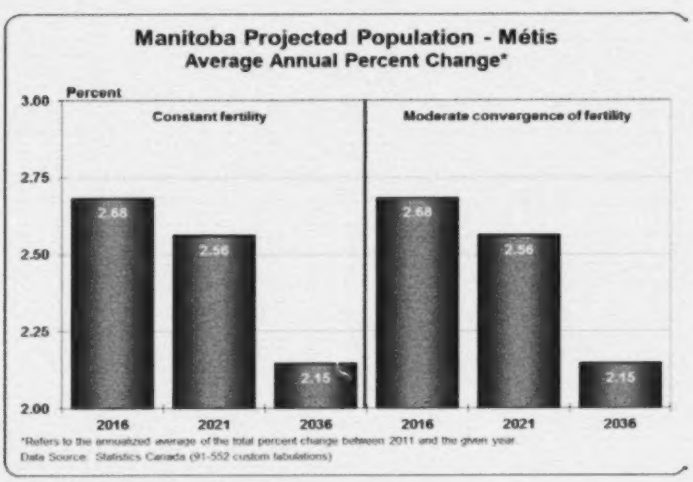


Under the assumptions of Moderate Convergence, Statistics Canada anticipates nearly identical growth over the projection period.

Since there is very little difference between the fertility rates of the Métis and non-Aboriginal populations, the results from the two projection scenarios are very similar. Only in 2031 does Statistics Canada's assumption of a reduction in Aboriginal fertility have a noticeable impact on Manitoba's projected Métis population.

Métis Growth Rates

Under the assumptions of the Constant Fertility scenario, Statistics Canada expects Manitoba's Métis population will increase by an average of 2.15% per year over the duration of the projection. Over the short and medium terms, average annual growth rates of 2.68% and 2.56%, respectively, are anticipated.

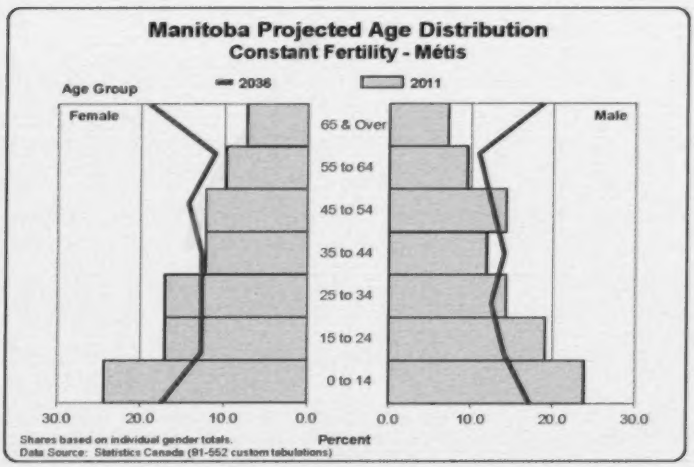


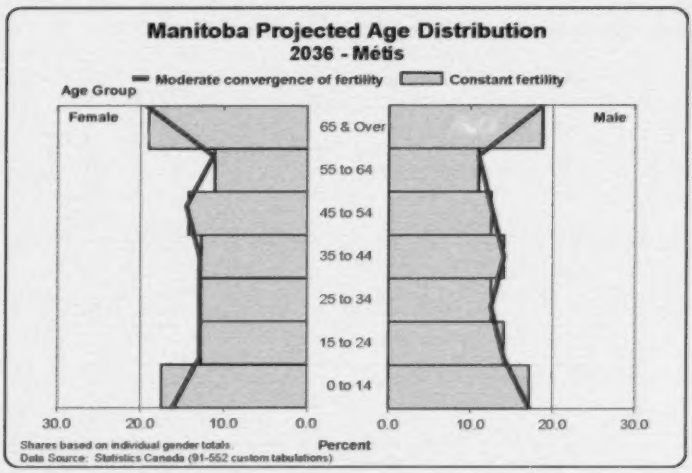
The Moderate Convergence and Constant Fertility scenarios result in the same average annual growth rates over the short, medium and long terms.

Métis Age Structure

Under the assumptions of the Constant Fertility scenario, Statistics Canada expects that by 2036 there will be a reduction in population share for Manitoba's Métis individuals aged 0 to 14, 15 to 24 and 25 to 34. With the exception of males aged 45 to 54, moderate increases in share are projected for the older age groups. The 65 and over age group is expected to show the largest gain in share over the projection.

Compared to the Constant Fertility scenario, the Moderate Convergence scenario projects 0 to 14 year-old females will contribute just over 1.5 percentage points less to Manitoba's 2036 Métis population. Influenced only by the reduction in fertility, scenario differences in the other age groups are negligible.

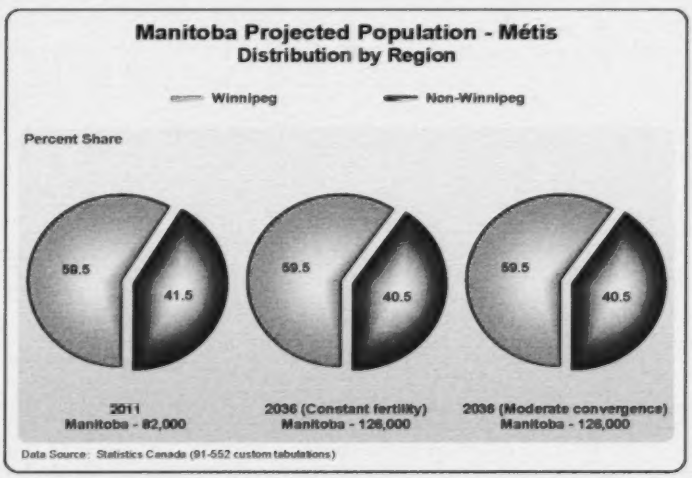




Métis Regional Growth

In 2011, 58.5% of Manitoba's Métis population lived in the Census Metropolitan Area (CMA) of Winnipeg. The remaining 41.5% resided outside of Winnipeg.

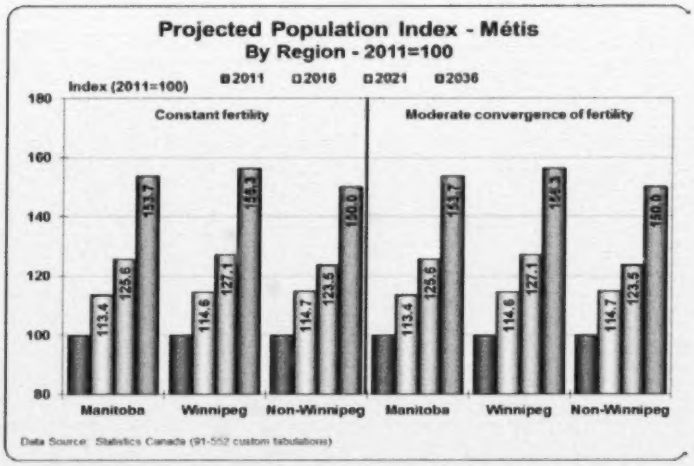
Both of Statistics Canada's scenarios project an increase of one percentage point in the proportion of Métis residents living within Winnipeg in 2036.



Manitoba's Métis population is expected to increase 53.7% by 2036, for both projection scenarios.

Under the conditions of both projection scenarios, Winnipeg's Métis population is expected to increase by 56.3%.

The Métis population living outside Winnipeg is expected to have slightly lower growth than the population residing within. Under both scenarios, Statistics Canada expects the Métis population living outside Winnipeg will increase 50.0% by 2036.



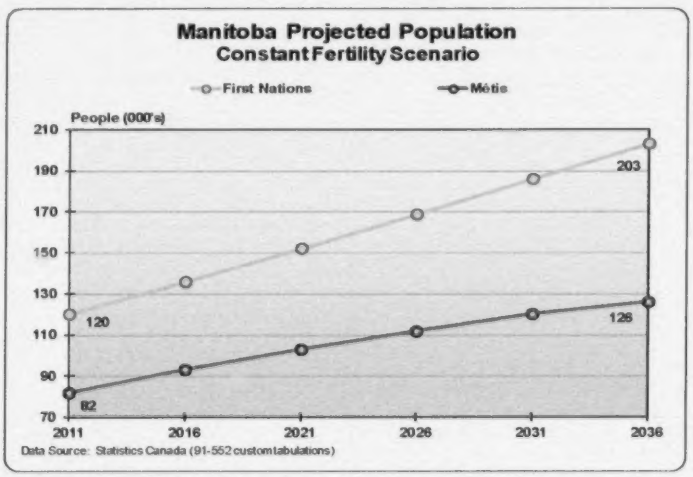
Aboriginal Group Comparisons

MANITOBA PROJECTED POPULATION BY ABORIGINAL GROUP, SCENARIO AND AGE GROUP (000'S)

Year	14 & Under	15 to 64	65 & Over	Total
First Nations				
2011	43	72	5	120
2036 - Constant fertility	57	124	22	203
2036 - Moderate convergence	47	123	22	191
Métis				
2011	20	57	5	82
2036 - Constant fertility	22	81	24	126
2036 - Moderate convergence	22	80	24	126

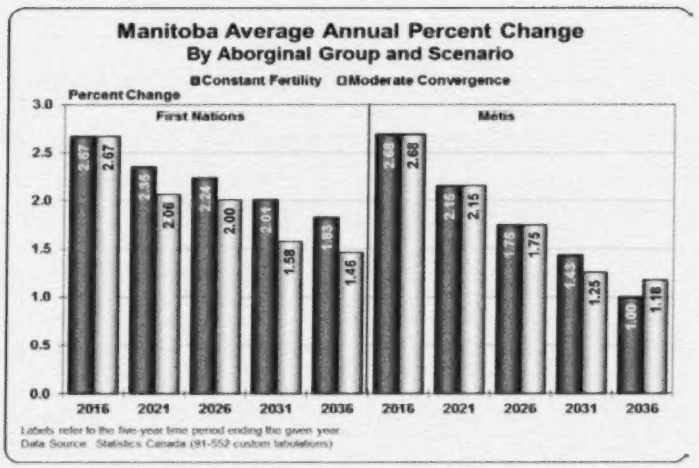
Note: Numbers may not add to totals due to rounding
Data Source: Statistics Canada (91-552 custom tabulations)

Under the conditions of Statistics Canada's Constant Fertility scenario, the difference between Manitoba's First Nations and Métis populations will more than double, from 38 thousand individuals in 2011, to 77 thousand individuals in 2036.



Both of Statistics Canada's scenarios anticipate a reduction in the growth rates of Manitoba's First Nations and Métis populations as the projection progresses.

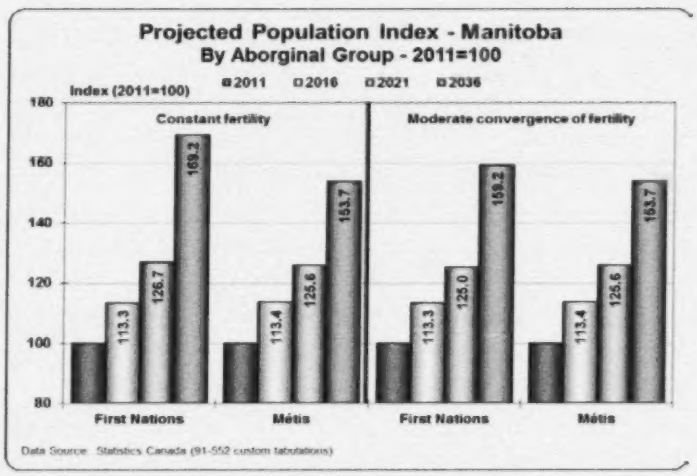
Compared to the Moderate Convergence scenario, Manitoba's First Nations community is expected to experience higher growth rates under the Constant Fertility scenario for each five-year time period.



Statistics Canada projects Manitoba's Métis community will have equivalent growth rates under the assumptions of both scenarios until the 2026 to 2031 period. Between 2026 and 2031, the Constant Fertility scenario results in a higher average annual growth rate. However, the Moderate Convergence scenario is expected to have a higher rate of growth from 2031 to 2036.

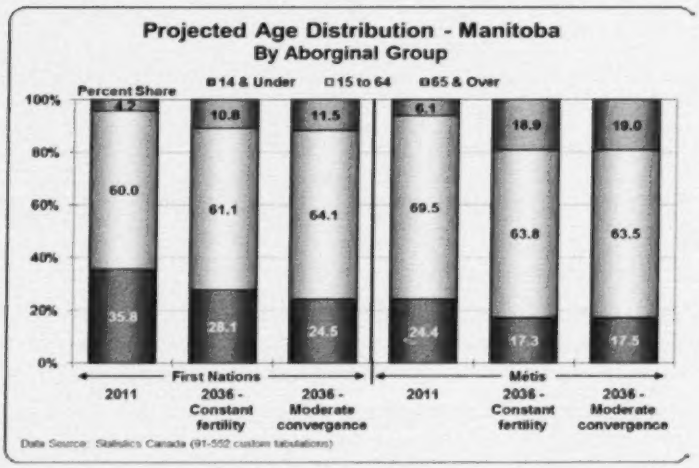
Under the conditions of the Constant Fertility scenario, Statistics Canada expects Manitoba's First Nations population will increase by 69.2% over the projection period. A total increase of 53.7% is anticipated for Manitoba's Métis population.

The Moderate Convergence scenario projects growth of 59.2% for Manitoba's First Nations population, while 53.7% growth is expected for the Métis population.



Aboriginal Groups by Age

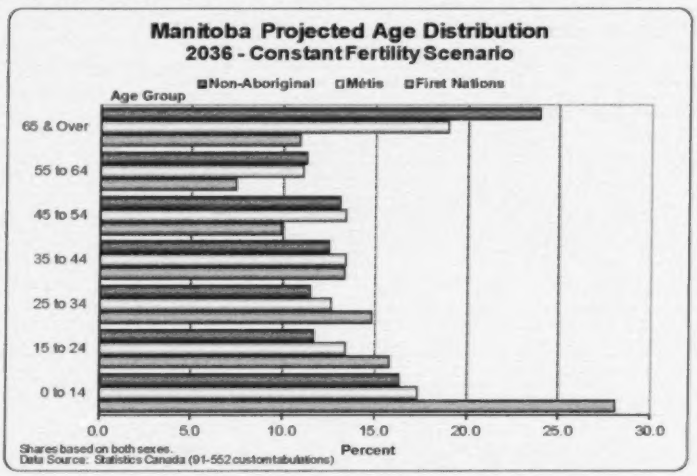
Between 2011 and 2036, Statistics Canada's Constant Fertility scenario expects Manitoba's First Nations population aged 14 & under will experience a decline in share of 7.7 percentage points. Shares for the age groups 15 to 64 and 65 & over are both expected to increase, by 1.1 percentage points and 6.6 percentage points, respectively.



Under the Moderate Convergence scenario, the share for the 14 & under age group is projected to decrease by 11.3 percentage points. Shares for the age groups 15 to 64 and 65 & over are both expected to increase, by 4.1 percentage points and 7.3 percentage points, respectively.

For Manitoba's Métis population, Statistics Canada projects the share of individuals aged 14 & under will decline by 7.1 percentage points under their Constant Fertility assumptions. A reduction in share of only 6.9 percentage points is expected under their Moderate Convergence scenario. The Moderate Convergence scenario projects the largest gain in share for the 65 & over age group, at 12.9 percentage points. The Constant Fertility scenario expects the smallest decrease in share for the 15 to 64 age group, with a decline of 5.7 percentage points.

Statistics Canada's Constant Fertility scenario projects that in 2036 Manitoba's First Nations population will be the most youthful. Statistics Canada anticipates that 28.1% of First Nations Manitobans will be aged 14 or under, while only 17.3% of Métis will be in this age group. A share of 16.3% is expected for the non-Aboriginal population.



Statistics Canada projects that the non-Aboriginal population will have the largest share of individuals in the age group 65 and over, at 23.9%. The share is expected to be 18.9% for Manitoba's Métis population, while the First Nations population is projected to have the smallest share, at 10.8%.

Manitoba Labour Market Projections

The labour force has undergone dramatic changes over the last 65 years due to a variety of factors, including demographic, economic and social effects. These include a meteoric rise in the proportion of women entering the labour force following World War II, changes in fertility rates, divorce rates, educational attainment, pension plans, flexible work plans, availability of services such as child care and parental leave, wars, major economic events and so forth.

While it is impossible to project each factor affecting the labour force separately, many of these demographic and societal changes are captured in cohort effects. In other words, people of the same generation are more likely to behave in a similar manner than are those who are younger or older. As such, it makes more sense to project age/sex-specific participation rates by birth cohorts, rather than extrapolating by age group.

BC Stats developed an entry and exit rate cohort analysis model to project labour force participation rates for British Columbia based on work done by the Organization for Economic Co-operation and Development (OECD) and the Australian government. The methodology used in this projection is largely extracted from the report produced in 2013 (Schrier, 2013). It calculates the rate of entry to, or exit from, the labour force for each five-year age group between ages 15 and 69, plus another category for those aged 70 and over. These entry or exit rates are applied to existing cohort participation rates to project their future participation for Manitoba and its economic regions. MBS population projections (MBS 2015 – 3, Medium Scenario) were then used to produce labour force projections to 2029.

MBS firmly maintains that due to statistical anomalies in their net undercoverage results, Statistics Canada substantially underestimated Manitoba's 10 May 2011 population. To mitigate this undercount, MBS developed its own series of population estimates by age, gender and economic region, going back to 1 July 2007. MBS then used this new population series to develop its own labour force estimates. These adjustments effectively added 16,154 individuals to Statistics Canada's estimate of Manitoba's 1 July 2013 population and 10,800 individuals to Statistics Canada's 2014 labour force estimate. [1] ***These labour market projections use MBS' adjusted population and labour force estimates and are not consistent with Statistics Canada's estimates.***

Manitoba's economic regions each have unique demographic characteristics that make an overall Manitoba labour force participation rate projection inadequate for producing regional forecasts of labour. The regional projections produced here illustrate the variation between the regions and highlight the necessity of projecting labour force participation separately by region. Manitoba is projected independently, and does not equal the sum of the regions.

[1] The labour force adjustment for 2014 was based on population projections and will not match MBS' current published estimate.

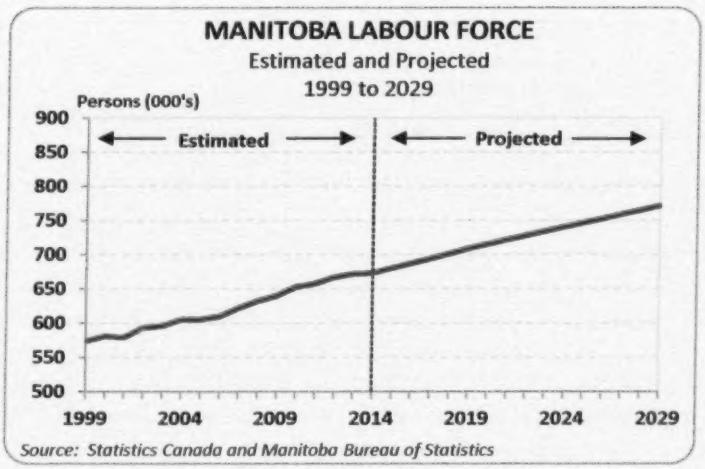
The Manitoba labour force averaged 672,900 persons in 2014. The province is projected to exhibit growth throughout the 15 year projection. Manitoba's labour force grew by 99,000 persons from 1999 to 2014 and is expected to grow by an additional 98,600 over the next 15 years, resulting in a labour force level of 771,400 persons by 2029.

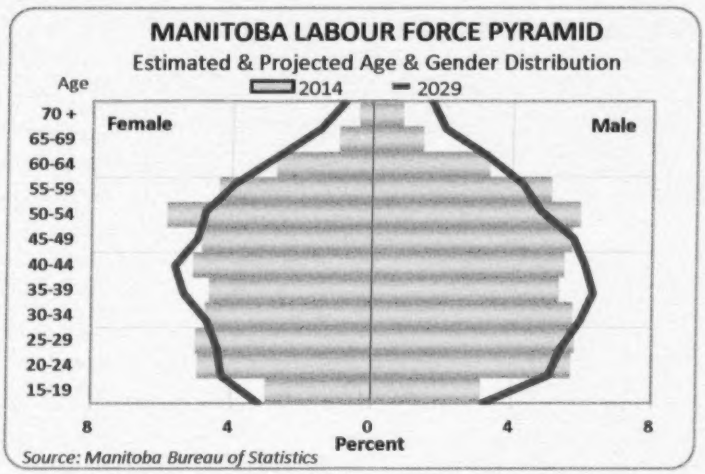
Female labour force is expected to rise steadily to 355,400 in 2029, a 13.5% increase. It is projected that the male labour force level will also climb, from 359,600 in 2014, to 416,000 in 2029, or 15.7%. This would result in a labour force comprised of 46.1% females.

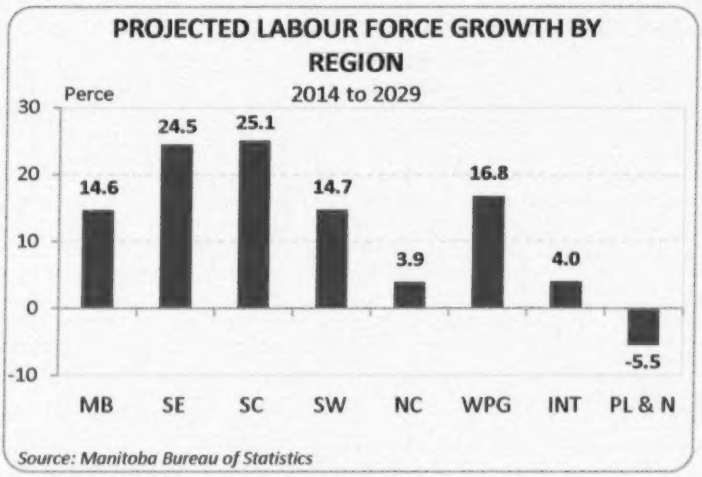
For male youth (15 to 24 years), labour force levels are expected to rise from 59,200 to 63,800 over the projection period. For those aged 25 to 64, it is projected that there will be a 13.3% increase to 323,100 persons. Males aged 65 and older can expect to realize a labour force of 29,100 in 2029, an 89.0% increase.

For female youth, a 7.6% increase in labour force is expected, reaching 57,700 persons in 2029. The labour force of females aged 25 to 64 is projected to increase from 250,600 to 280,400 persons, while those 65 and older achieve an increase of 92.6%, climbing to 17,400 persons.

All economic regions are projected to realize growth in the labour force over the projection period, with the exception of the combined region of Parklands and North. The strongest

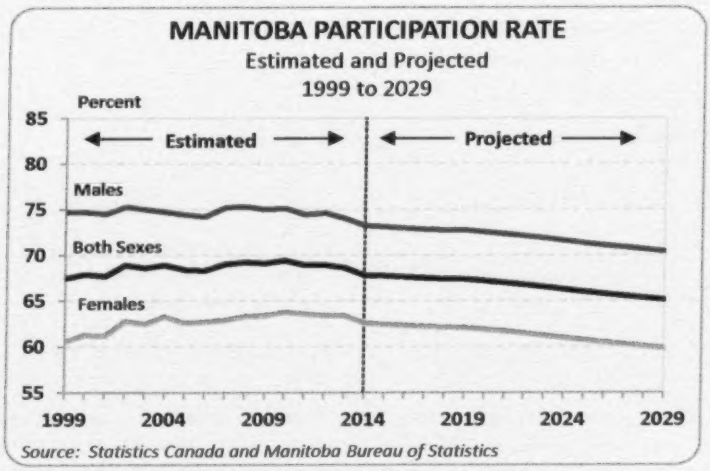




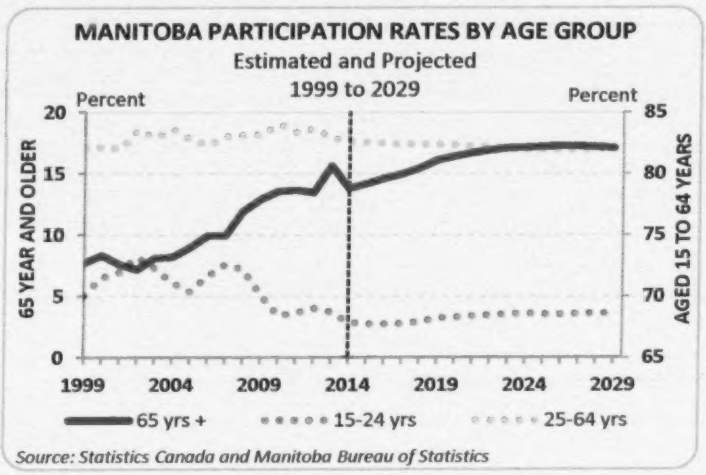


growth is expected in the South Central region, where the labour force is projected to increase by 25.1%.

In Manitoba, the participation rate was 67.8% in 2014. Based on the cohort model and MBS' population projections, overall Manitoba labour force participation rates are projected to trend down over the next 15 years. It is anticipated that the total participation rate will drop 2.7 percentage points to 65.1% in 2029.



Participation rates for Manitoba women are lower than those for men, with 2014 levels at 62.6% and 73.2%, respectively. The overall participation rates of men and women are expected to decline over time at an increasing rate. The rate for males is projected to drop to 70.4% in 2029, while the female rate drops to 59.9%.



The overall decreasing trend in participation is mainly due to the increasing proportion of elders in the labour force. With the median age of the labour force population expected to increase, the share of persons 65 and older in the labour force population is expected to increase from 17.9% to 23.0%. Even though participation rates of older Manitobans are also expected to rise over time, they will still be significantly lower than those of younger people. Consequently, an aging population will contribute to proportionately fewer people participating in the labour force.

All economic regions are projected to see declining participation rates from 2014 to 2029. The Southwest region is projected to have the highest participation rate among the regions in 2029, at 68.3%.

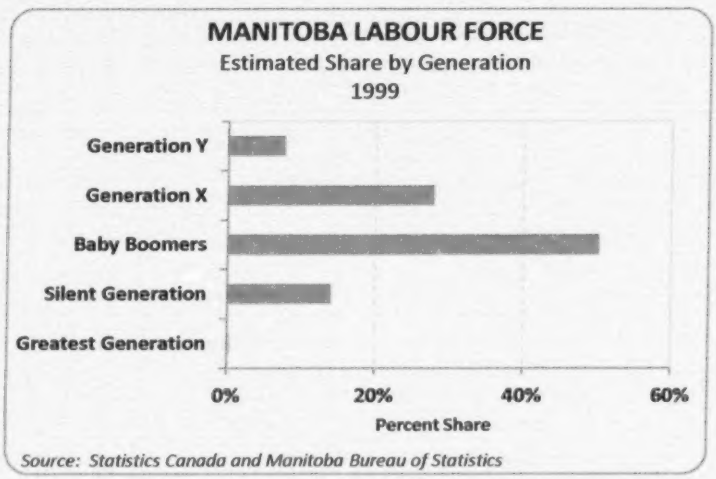
Social Generations

Based on MBS' projection, overall, Manitoba labour force participation rates are projected to trend down from 2014 to 2029. Despite this, Manitoba's labour force is projected to see growth throughout the 15 year projection. The overall decreasing trend in participation is mainly due to the increasing proportion of older individuals in the labour force population. With the consequences of an aging population, an interesting point of analysis is the concept of social generations, particularly with respect to the rise and fall of Baby Boomers in the labour force.

Social generations are birth cohorts, of varying size, that experienced a significant event within a given time period. Events range from economic crisis and war, to technological advance and social progress. The defining event and magnitude of the generation can have significant impact on the cohort, the country's economy and society as a whole, throughout the life of the cohort.

Manitoba's 2014 population is composed of approximately six, loosely defined, generations:

- The *Greatest Generation* (Born Pre-1925), aged 90 and over in 2014, includes those that fought during World War II and came of age during the great depression.
- The *Silent Generation* (1925-46), aged 68 to 89, includes some who fought in World War II, many who fought in the Korean War, and is a generation that experienced the civil rights movement. This generation includes the majority of baby boomer parents.
- *Baby Boomers* (1947-66), aged 48 to 67, were the result of a sudden rise in birth rates following WWII. They are associated with a rejection of traditional values and are currently a trending topic due to the economic and social impacts of their retirement and aging.
- *Generation X* (1967-79), aged 35 to 47, is comprised of the "baby bust" group that is often characterized through the experiences of living in the shadow of boomers.
- *Generation Y* (1980-95), aged 19 to 34, includes the children of the boomer generation. This "echo of boom" is smaller than the boomer generation and influenced by considerable socio-economic change such as higher divorce rates, increased female labour force participation, and technological advance.
- *Generation Z* (1996+), aged 0 to 18 in 2014, were born after the invention of the World Wide Web and into an age of advanced consumer technology.



Projected labour force shares by generation are an approximate estimation of the distribution of the Manitoba labour force over time.

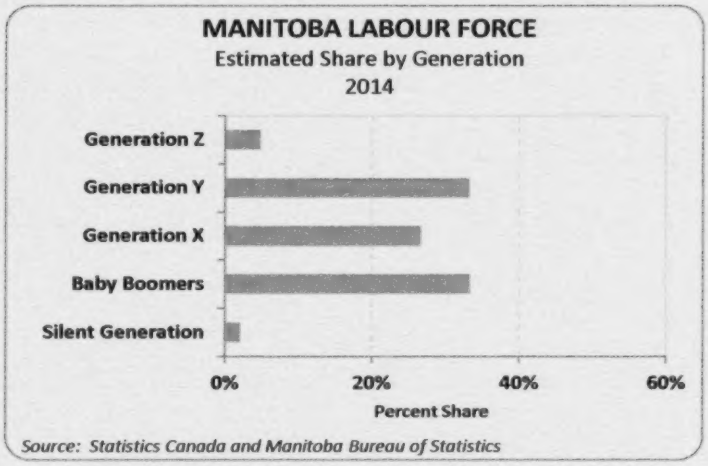
Baby Boomers comprised the majority of Manitoba's labour force in 1999, at just over 50%, while Generation X held just under 28%.

In 2014, the labour force was spread between Baby Boomers (33.3%), Generation Y (33.2%) and Generation X (26.6%).

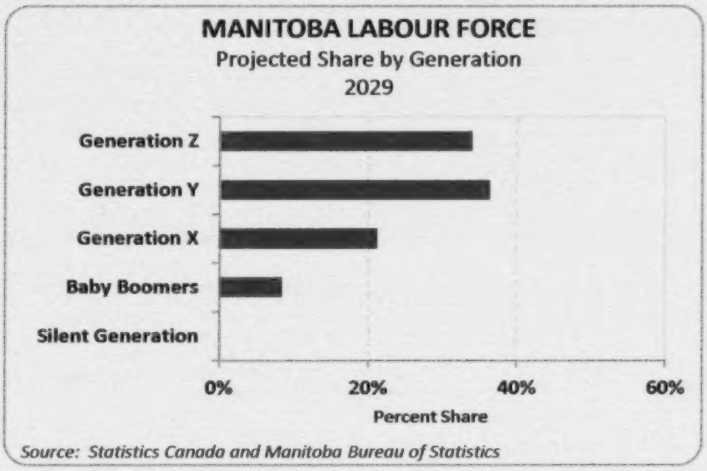
By 2029, it is expected that the Baby Boomers will hold just 8.4% of the labour force share while Generation Y and Generation Z take over, with 36.3% and 34.0%, respectively.

Baby Boomers reached their peak share in the mid-eighties when they were just 20 to 39 year old and comprised approximately 56% of the labour force. They made up more than half of the labour force for over two decades.

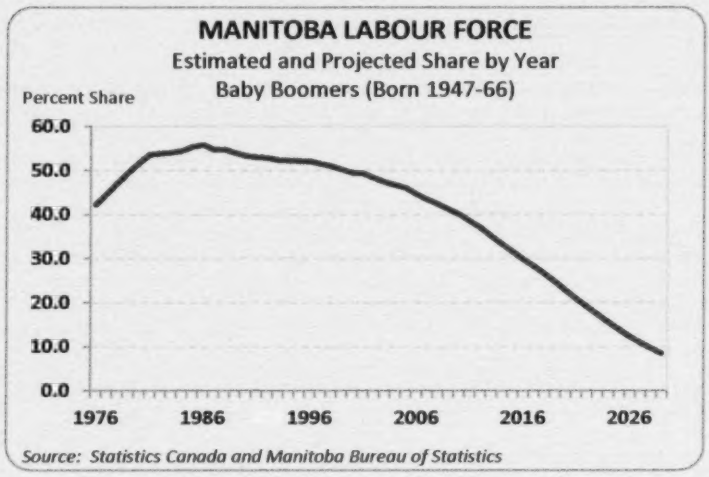
The "fall of the boomer" over the 15 year projection is expected to have significant consequences as this large group leaves the labour force. Even though participation rates of older Manitobans are expected to rise over time, they will still be significantly lower than those of younger people. As baby boomers age, they will contribute to proportionately fewer people participating in the labour force. This will cause a decline in the overall participation rate for Manitoba.



Source: Statistics Canada and Manitoba Bureau of Statistics



Source: Statistics Canada and Manitoba Bureau of Statistics



Source: Statistics Canada and Manitoba Bureau of Statistics

Probe Research: Manitoba Business Leaders Index

The Manitoba Business Leaders Index (MBLI) is an annual survey, conducted by Probe Research Inc, of the provincial landscape as viewed by business leaders from across the province. The survey sample includes a stratified sampling of CEOs, presidents, business owners and designated senior corporate officers from 200 small, mid-sized and large commercial "establishments" as defined by Statistics Canada and the Manitoba Bureau of Statistics (MBS). Establishments include publicly traded and private companies from all major sectors of Manitoba industry.

For MBLI 2015, executive telephone interviews were conducted between November 7th and December 7th, 2015.

For the 2015 survey, a supplementary section on business adaptation to changing demographics in the labour market was added for MBS. Manitoba business leaders were presented with six potential actions that could be taken to respond to increasing age, gender and cultural diversity in the provincial labour market. Respondents were then questioned as to how likely their company would be to implement each policy.

A "Likelihood Score" is presented with the results. It is a weighted average of the responses that assumes an equal distribution of emotional/mental response between choices. The score can range from a low of 1 (not at all likely) to a high of 5 (very likely). The scores are calculated as follows, based on a 5 point scale, and rounded:

Likelihood Score = [(count 'Very Likely x 5) + (count '4' x 4) + (count '3' x 3) + (count '2' x 2) + (count 'Not at all likely' x 1)] / Total count

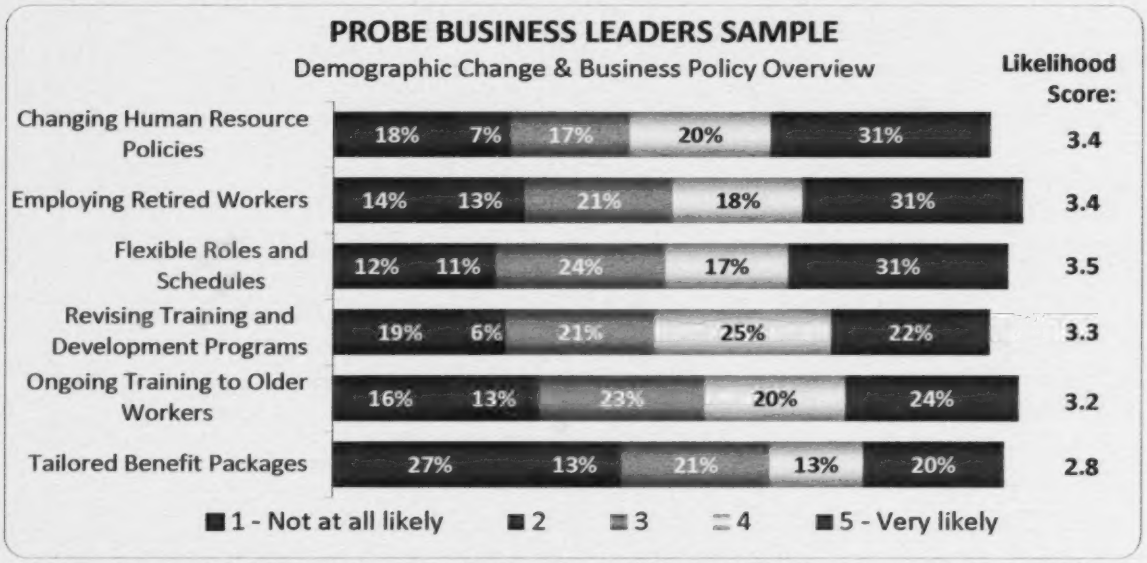
For example, the Likelihood Score for changing human resource policies is 3.4, derived from [(61 x 5) + (39 x 4) + (33 x 3) + (14 x 2) + (35 x 1)] / 182.

Results

Business leaders were most receptive to *changing human resource policies* (31% very likely, 20% somewhat likely), *employing retired workers on a part-time or contract basis* (31% very likely, 18% somewhat likely) and *offering more flexible roles and schedules* (31% very likely, 17% somewhat likely).

Slightly less interest was shown in *revising management training and development programs* (22% very likely, 25% somewhat likely) and *providing ongoing training to older workers to acquire new skills* (24% very likely, 20% somewhat likely).

Business leaders were least amenable to *offering benefit packages that are tailored to different age groups* (20% very likely, 13% somewhat likely).



Note: Percentages are calculated with "Don't know/Prefer not to Specify" in the total. This category is not in included in the chart therefore the stacked bars will not add to 100%.

Notable variations in business size and location included:

- Large companies with 50 employees or more were more likely to *change human resource policies* (51% very likely, 26% somewhat likely) compared to mid-sized companies with 10 to 49 employees (29% very likely, 24% somewhat likely) or small companies with less than 10 employees (15% very likely, 9% somewhat likely).

- Large companies were more likely to *revise management training and development programs* (33% very likely, 33% somewhat likely) compared to mid-sized (18% very likely, 28% somewhat likely) or small companies (16% very likely, 13% somewhat likely).

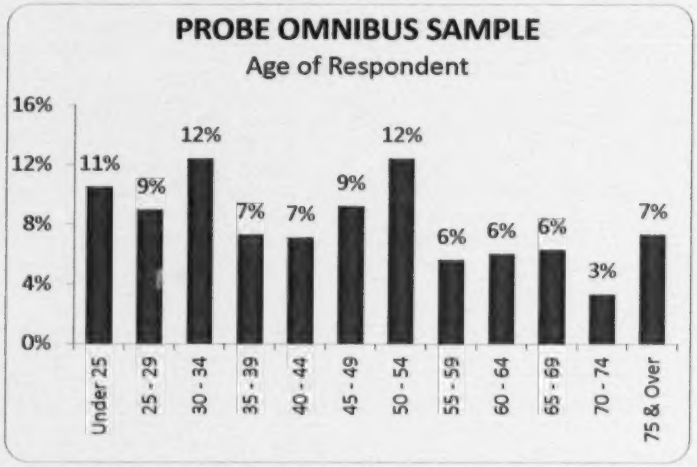
- Companies in Winnipeg were slightly more responsive to *offering benefit packages that are tailored to different age groups* (22% very likely, 17% somewhat likely) compared to companies outside of Winnipeg (16% very likely, 8% somewhat likely).

Social Indicators

Probe Research: Manitoba September 2015 Omnibus Survey

The *Probe Research province-wide Omnibus survey* is conducted via telephone interviews among a random and representative sampling of 1,000 adults residing in Manitoba. The September 2015 Omnibus was conducted between September 14th and September 23rd. Modified random digit dialing covering both landline and wireless numbers was used to ensure that all Manitoba adults would have an equal opportunity to participate. Minor statistical weighting has been applied to this sample to ensure that age and gender characteristics properly reflect known attributes of the province's population.

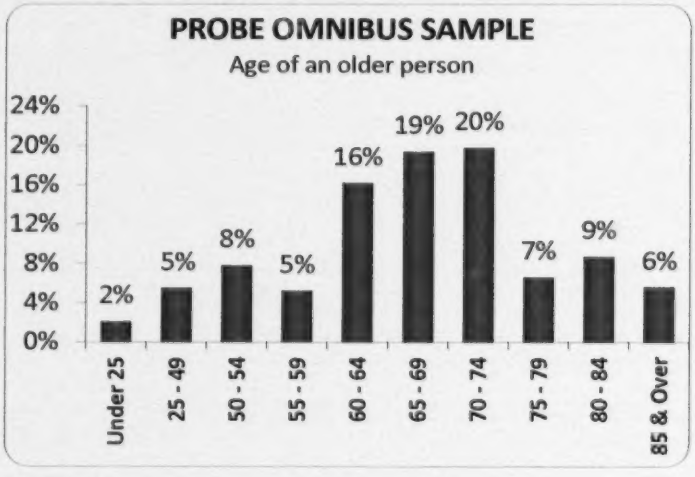
The weighted sample was 52% female and ages of respondents were well distributed. Over 50% had completed post-secondary education and 32% of persons had children at home. Of the respondents, 68% owned their own home, 48% earned $60,000 or more in household income and 60% lived inside Winnipeg.



For the September 2015 survey, a supplementary section on perceptions of age and growing older was added for MBS. Manitobans were presented with questions pertaining to aging issues such as Abuse, Financial Security, Loneliness and Health. These issues are of interest as they could become more pronounced due to Manitoba's future demographic change.

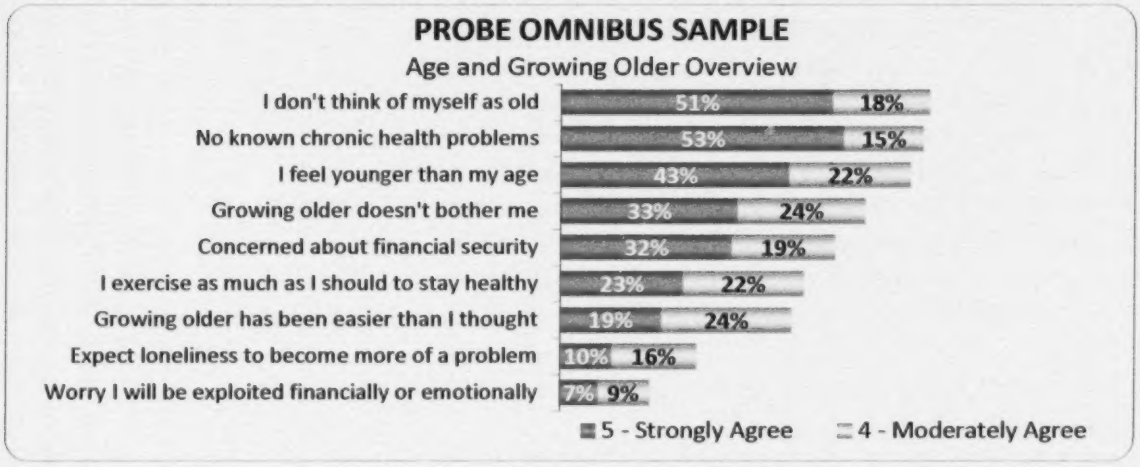
According to the survey results, most Manitobans see the threshold of being an "older person" as starting at about retirement age. More than half of respondents (55%) cited this threshold as being between the ages of 60 and 74 years. The average age given by respondents was 64.4 years.

Younger adults expressed a lower threshold for being an "older person". Among those aged 18-34 years, the average threshold age was



cited as being 57.5 years, versus 70.2 years among those aged 55 years or older.

When asked to express their strength of agreement or disagreement with nine statements about age and growing older, strong majorities agreed that they do not think of themselves as old (69% agree versus 15% disagree) and that they do not have any known chronic health problems (68% agree versus 22% disagree). There was also solid agreement among Manitobans that they feel younger than their age (64% agree versus 16% disagree).



Several statements were greeted with a wider range of views. These included statements about growing older not bothering them (57% agree versus 24% disagree), being concerned about financial security in their older years (51% agree versus 24% disagree), getting as much exercise as they should to stay healthy (45% agree versus 27% disagree) and that getting older has been easier than they thought it would be (43% agree versus 22% disagree).

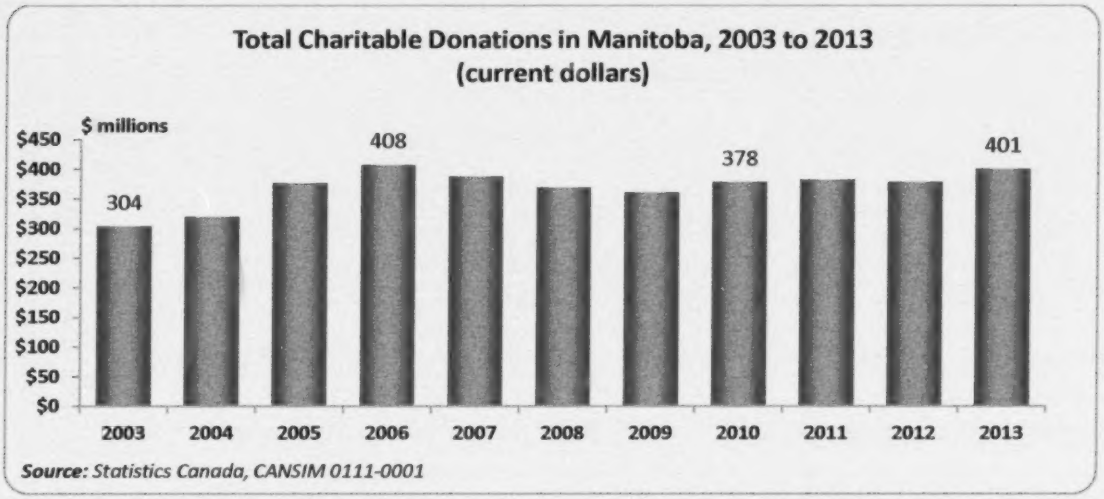
Relatively few anticipated loneliness being a problem as they get older (26% agree versus 54% disagree) or worried that they would be emotionally or financially exploited (16% agree versus 69% disagree).

Younger adults aged 18-34 years were among the most likely to see themselves as being free from chronic health concerns (77% agree, versus 59% among those aged 55 years and over), and among the least likely to report that they feel younger than their age (58% agree). They also tend to doubt that loneliness will be a problem in their later years (63% disagree, versus 46% among those aged 55 years and over).

Residents of lower-income households, earning less than $30,000, were less likely than average to agree that they have no chronic health problems (50% agree), and more likely than average to feel concern about loneliness eventually being a problem (43% agree) or about being eventually at risk of exploitation (33% agree).

Charitable Donations in Manitoba: 2003 to 2013

Based on information from Statistics Canada, the total amount of charitable donations in Manitoba rose from $304 million in 2003 to $401 million in 2013. On this basis, annual charitable donations increased by 31.9% over the 10 year period with an average growth of $9.7 million per year.



At the Canada level, the increase in the total amount of charitable donations was $2.1 billion, for an increase of 32.1% over the same period of time.

Though the total donation has grown, the number of donors and the percentage of potential donors (all taxfilers) who do donate have decreased. Of the total population who filed taxes, 28.5% of them made charitable donations in 2003. In 2013, this share decreased to 25.3%.

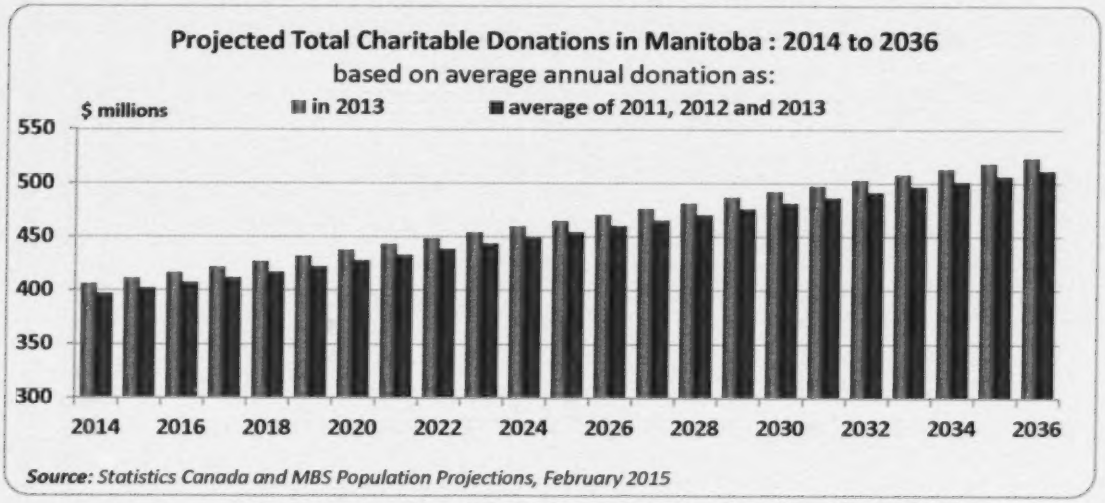
In Manitoba, the average individual donation made in 2003 was $1,308. By 2013, this amount rose to $1,757 per person for growth of 34.4%. At the national level, the average annual donation grew by $378 (up 32.4%) from $1,165 in 2003 to $1,543 in 2013.

Charitable donations increase steadily with the age of the donor. In 2013, the average annual donation made by a Manitoban under the age of 25 was $790. This compares to $2,260 for someone aged 65 or older.

Projecting Charitable Donations in Manitoba to 2036

Two approaches were used to project total charitable donations at the provincial level from 2014 to 2036.

The first supposes that average annual donations and the share of donors by age group remain at 2013 levels through 2036. The second approach uses the levels obtained by averaging the years 2011 to 2013. For both approaches, any change in charitable donations relates to projected population growth and aging only.



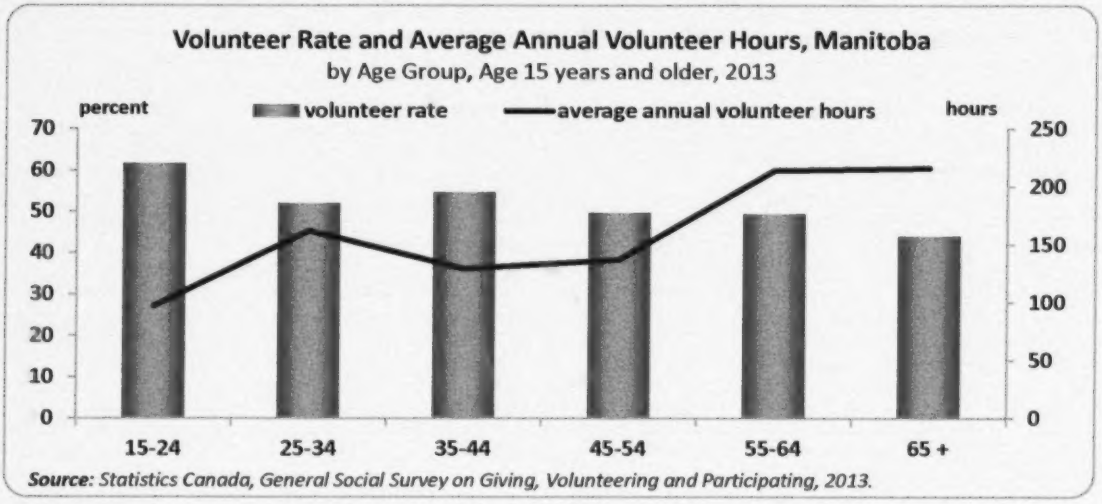
Using 2013 levels (approach 1), total charitable donations increase by just over 30%, from $401 million in 2013 to $523 million in 2036. If average annual donations per person were a bit lower, as in the second approach, total donations would increase by $110 million from the 2013 level to $511 million in 2036 (up 27.4%).

For both approaches, growth in total donations by age group varies substantially but the overall trend is similar between them. The total charitable donations are expected to grow based on increasing numbers of older individuals who, in general, donate more than younger persons.

Volunteerism in Manitoba: 2007, 2010 and 2013

Based on information from Statistics Canada, the total annual volunteer hours in Manitoba rose from 81.5 million in 2007 to 82.9 million in 2013. On this basis, annual volunteer hours increased by 1.7% over the six year period. The total annual volunteer hours in Manitoba fell by 7.5 million from 81.5 million in 2007 to 74.0 million in 2010. Over the three years, from 2010 to 2013, annual volunteer hours increased by 8.9 million. At the Canada level, the total annual volunteer hours decreased by more than 5% over the same period.

While the likelihood of volunteering in Manitoba generally decreases with age, the hours volunteered display the opposite pattern. The average annual hours volunteered were highest among older volunteers and lowest among youths (15-24 year old) and middle-aged (35-54 year old) volunteers. On average, volunteers aged 65 years and older devoted the most hours, at 216 hours annually. This was followed by those aged 55 to 64 at 214 hours. The average annual volunteer hours recorded by the youth and middle-aged volunteers were 97 and 129, respectively.

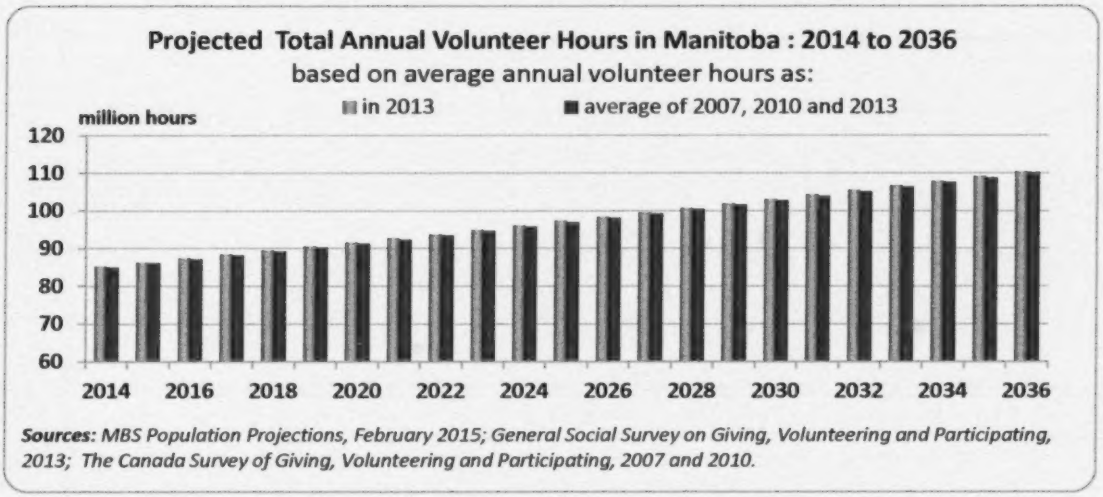


Source: *Statistics Canada, General Social Survey on Giving, Volunteering and Participating, 2013.*

Projecting Annual Volunteer hours in Manitoba to 2036

Two approaches were also used to project total annual volunteer hours at the provincial level from 2014 to 2036.

The first supposes that average annual volunteer hours by age group and the share of volunteers by age group remain at 2013 levels through 2036. The second approach uses the levels obtained by averaging the years 2007, 2010 and 2013. For both approaches, any change in total volunteer hours relates to projected population growth and aging only.



Sources: *MBS Population Projections, February 2015; General Social Survey on Giving, Volunteering and Participating, 2013; The Canada Survey of Giving, Volunteering and Participating, 2007 and 2010.*

Using 2013 levels (approach 1), total volunteer hours increase by more than 32%, from 82.9 million hours in 2013 to 110.3 million hours in 2036. If average annual volunteer hours per person were a bit lower, as in the second approach, total volunteer hours would increase by 27.1 million hours from the 2013 level to 110.0 million hours in 2036.

For both approaches, growth in total volunteer hours by age group varies substantially, but the overall trend is similar between them. Overall, total volunteer hours are expected to grow based on increasing numbers of older individuals, who in general contribute more volunteer hours than younger persons.

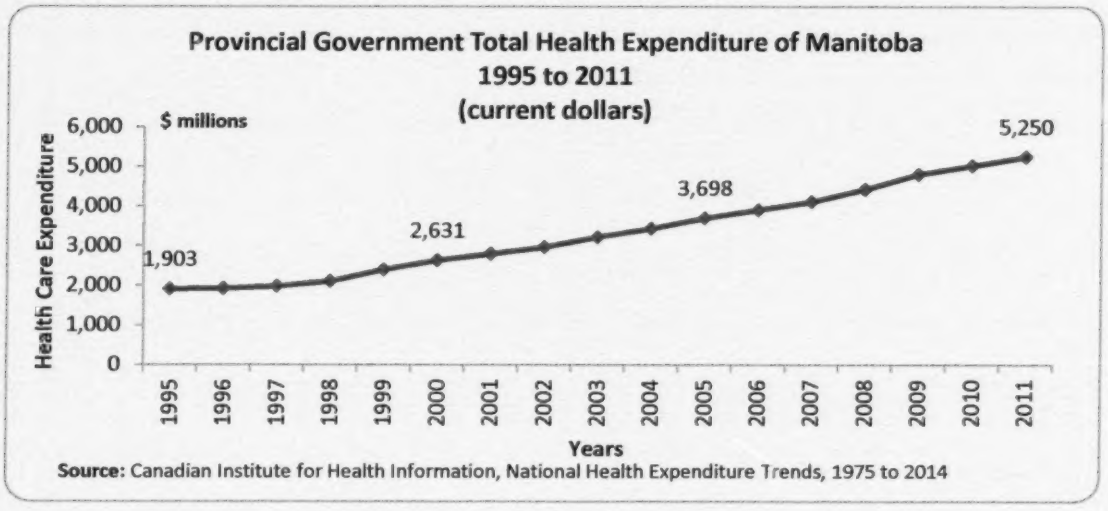
Healthcare Spending in Manitoba: 2012 to 2037

The cost of the health care system in Manitoba has been increasing steadily with its health care expenditures over the last decade. The issue of the financial sustainability of the healthcare system came into focus in the late 1990s when federal and provincial governments were forced to cut overall spending to eliminate chronic deficits. While the province is predominantly responsible for its own health care delivery, the federal government provides funding support through the Canada Health Transfer (CHT). In the context of the current national debate on the future of Canada's healthcare system, this study focuses on the future health care expenditure in Manitoba for the next 25 years.

Manitoba's future health care expenditures were projected from 2012 to 2037 using the outcomes of the following report: Sustainability of the Canadian Health Care System and Impact of the 2014 Revision to the Canada Health Transfer -September 2013, Society of Actuaries and Canadian Institute of Actuaries. This report used the Canadian Institute for Health Information's (CIHI's) NHEX Database as the starting point for the forecasts. The objective was to evaluate the future costs of the Canadian health care system, to evaluate and analyze the implications of the proposed changes to the CHT calculation formula, and to assess the sustainability of the Canadian health care system over a 25-year horizon.

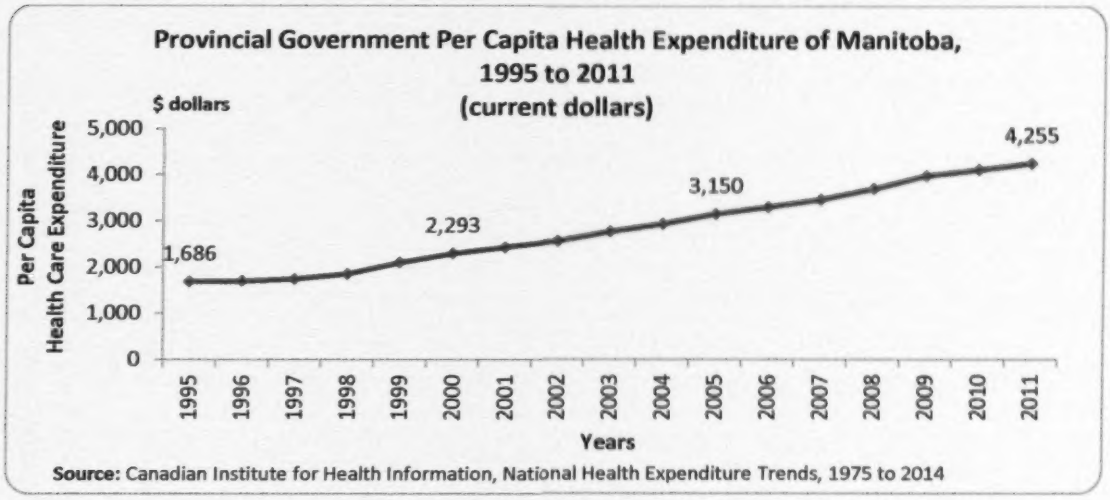
Health Care Expenditure of Manitoba: 1995 to 2011

The provincial government–sector total health expenditure of Manitoba rose from $1,903 million in 1995 to $5,250 million in 2011. On this basis, annual health expenditure increased by 175.8% over the 16 year period with an average growth of $209 million per year.



Source: Canadian Institute for Health Information, National Health Expenditure Trends, 1975 to 2014

Over the past years, Manitoba ranks between second to fifth among the most expensive provinces of Canada in terms of per capita health care expenditures. The provincial government–sector per capita health expenditure in Manitoba rose from $1,686 in 1995 to $4,255 in 2011. On this basis, annual per capita health expenditure increased by 152.4% over the 16 year period with an average growth of $161 per year.



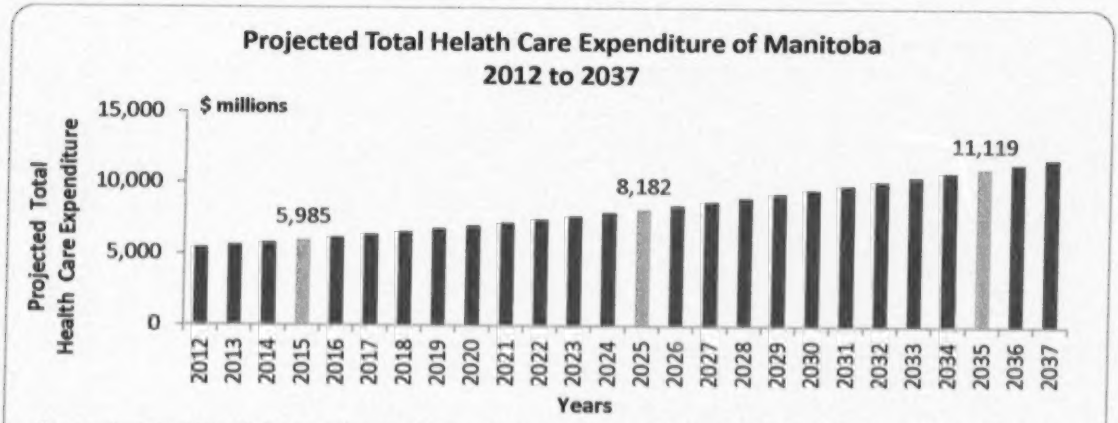
Source: Canadian Institute for Health Information, National Health Expenditure Trends, 1975 to 2014

At the Canada level, the increase in the amount of provincial government–sector total health expenditure was $5.1 billion, for an increase of 166.3% over the same period of time. The increase in the amount of provincial government–sector per capita health expenditure was $133, for an increase of 127.2% over the same period of time.

Projecting Health Care Expenditure of Manitoba to 2037

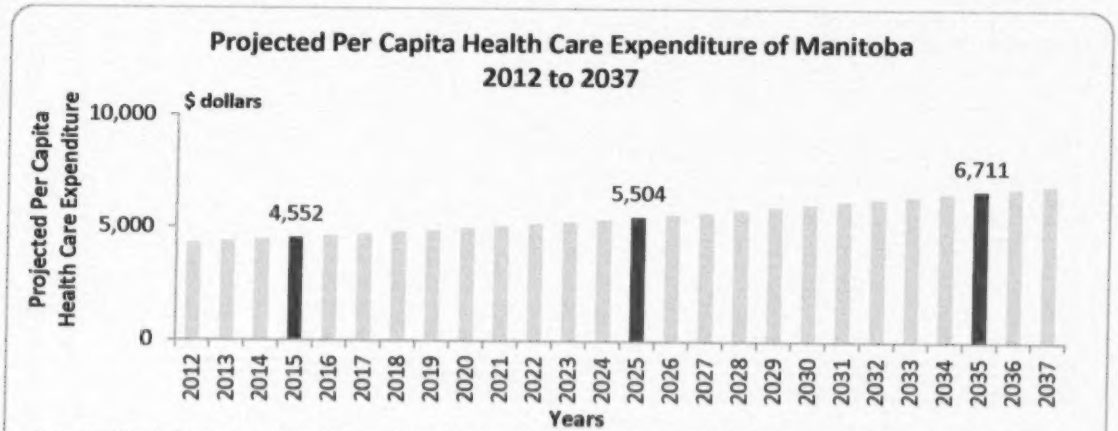
This study used the projected provincial government–sector total health expenditure of Manitoba for 2012 to 2037 from the Society of Actuaries and Canadian Institute of Actuaries report. The projected provincial government–sector per capita health expenditure was obtained by dividing the projected provincial government–sector total health expenditure by the projected provincial population.

In 2015, the projected total healthcare expenditure is $5,985 million; it is estimated to rise in 2025 to $8,182 million, an increase of 36.7%, while in 2035 it rises to $11,119 million which is an increase of 85.8%.



Source: *Sustainability of the Canadian Health Care System and Impact of the 2014 Revision to the Canadian Health Transfer –September 2013*, Society of Actuaries & Canadian Institute of Actuaries.

The projected per capita healthcare expenditure of Manitoba in 2015 is $4,552; it is estimated to rise in 2025 to $5,504, an increase of 20.9%, while in 2035 it rises to $6,711 which is an increase of 47.4%.



Sources: Manitoba Bureau of Statistics; *Sustainability of the Canadian Health Care System and Impact of the 2014 Revision to the Canadian Health Transfer – September 2013*, Society of Actuaries & Canadian Institute of Actuaries.

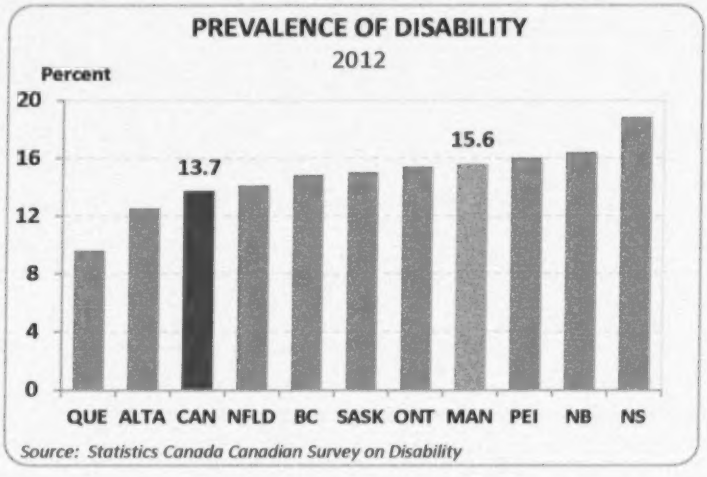
Disability

The Canadian Survey on Disability (CSD) is a national survey of Canadians aged 15 and over (off-reserve) whose everyday activities are limited because of a long-term condition or health related problem. The survey is based on a social model of disabilities, rather than a medical model, thereby improving upon previous surveys by enabling participants to indicate the degree to which their conditions impact their everyday lives. Data from the 2012 CSD provide a range of information on disability type and severity.

The survey sample was based on persons who reported activity limitation on the 2011 National Household Survey through a set of screening questions. The population living on First Nations reserves and those living in collective dwellings are excluded. Therefore, the data, particularly for aboriginals and for older age groups, should be interpreted accordingly.

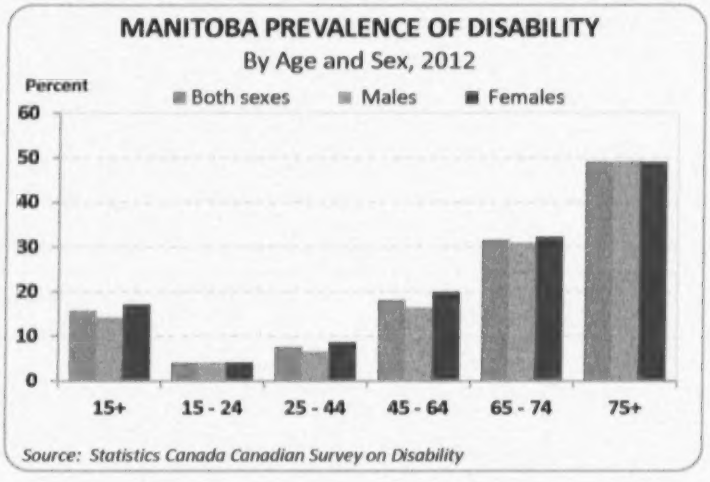
Prevalence and Severity of Disability, 2012

In 2012, 15.6% of the Manitoban population, or 145,270 individuals, aged 15 years or older reported having a disability that limited their daily activities. Nationally this rate was lower, at 13.7%. The prevalence of disability varied across the country, from 9.6% in Quebec, to 18.8% in Nova Scotia. Eastern provinces generally experienced higher rates than those in the west.



Of those reporting a disability, 4.7% were 15 to 24 years old, 15.8% were 25 to 44, 39.5% were 45 to 64, 17.4% were 65 to 74 and 22.6% were 75 years or older. Females accounted for 55.2% of those reporting a disability.

Disability frequency rises with age. In 2012, 4.1% of Manitobans aged 15 to 24 years reported having a disability, whereas 49.1% of those 75 and over reported a disability. In Manitoba, women were generally more likely to report disabilities than men, at 17.1% and 14.2% respectively.



Of Manitobans reporting a disability, 32.8% indicated their disability was Mild and 20.2% specified Moderate disability. Severe and Very Severe were indicated by 22.2% and 24.8%, respectively.

Disabilities were reported as Severe or Very Severe less often for Manitoba than nationally (47.0% vs 48.5%).

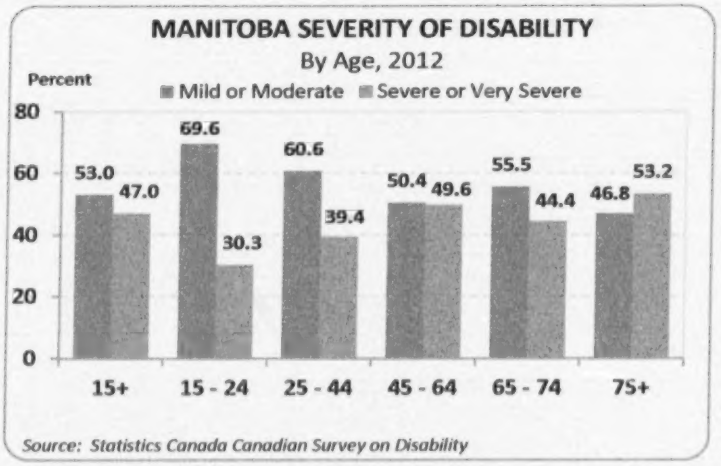
Disability severity generally rises with age. In 2012, 30.3% of Manitobans living with disabilities aged 15 to 24 years reported their disability was Severe or Very Severe, whereas this share was 53.1% for those 75 and over.

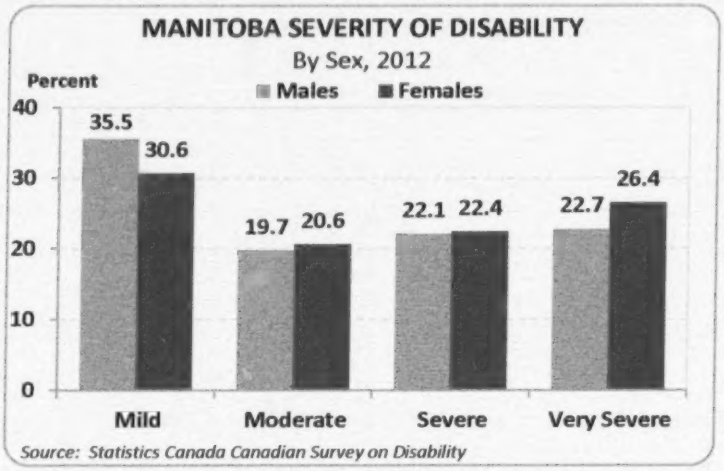
Women generally reported more severe disabilities than men in Manitoba. In 2012, 48.8% of females living with disabilities reported their disability was Severe or Very Severe while this share was 44.8% for males.

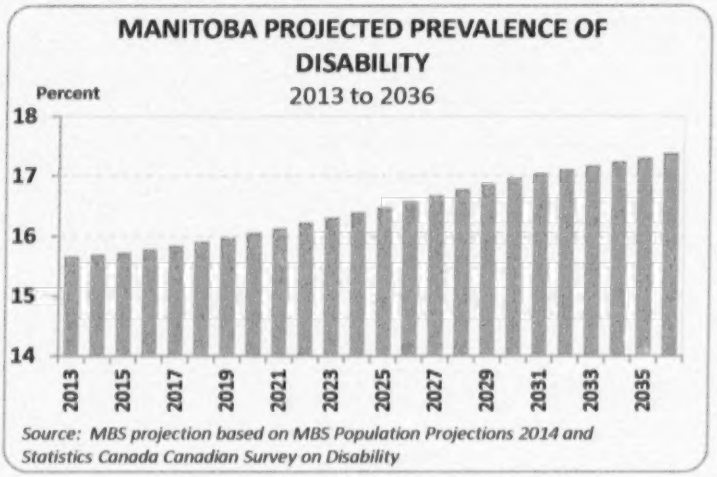
Projecting Prevalence and Severity of Disability to 2036

To project prevalence of disability from 2012 to 2036, rates by age-sex cohort were held constant at 2012 levels and applied to MBS' population projection. Any change in overall disability rates is due to projected population growth and aging only.

The total prevalence of disability for Manitoba increases by 1.8 percentage points over the projection, from 15.6% in 2012 to 17.4% in 2036.







The overall prevalence of disability for males increases by 2.0 percentage points over the projection, while the rate for females rises by 1.6 points.

The percentage of persons with a disability that will be 75 and over is projected to rise from 22.6% in 2012 to 31.2% in 2036. The share of 45 to 64 year-olds is expected to drop from 39.5% to 31.8%.

The approach to project severity of disability supposes that severity rates by age-sex cohort remain at 2012 levels through 2036.

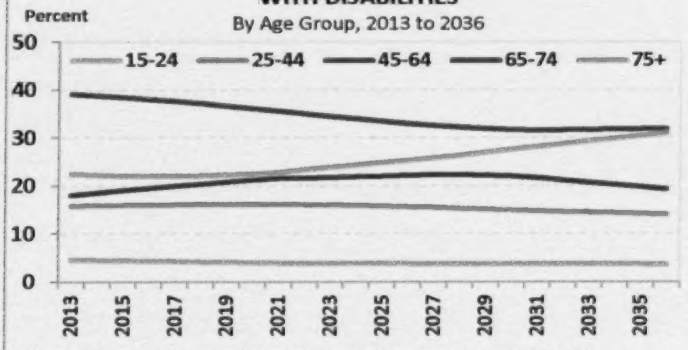
The share of persons living with a disability that report severity as Mild is expected to remain at 32.8%. The share of persons experiencing Moderate disability is expected to fall by 0.4 points to 19.8%. Severe and Very Severe disabilities are expected to rise to 2036 shares of 22.4% and 25.1%, respectively.

The share of females living with disabilities that are Severe or Very Severe is projected to increase from 48.8% in 2012 to 49.3% in 2036. This share for males is expected to increase 0.6 points to 45.4% in 2036.

By 2036, the age distribution of persons with a Severe or Very Severe disability is expected to change. In particular, the percentage of persons 75 and over is projected to rise, from 25.6% in 2012 to 34.7% in 2036. The share of 45 to 64 year-olds is expected to drop from 41.7% to 33.3%.

MANITOBA PROJECTED DISTRIBUTION OF PERSONS LIVING WITH DISABILITIES

By Age Group, 2013 to 2036

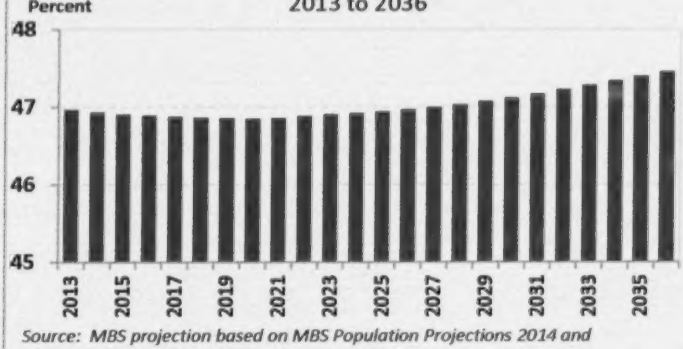


Source: MBS projection based on MBS Population Projections 2014 and Statistics Canada Canadian Survey on Disability

MANITOBA PROJECTED SEVERITY OF DISABILITY

Severe or Very Severe

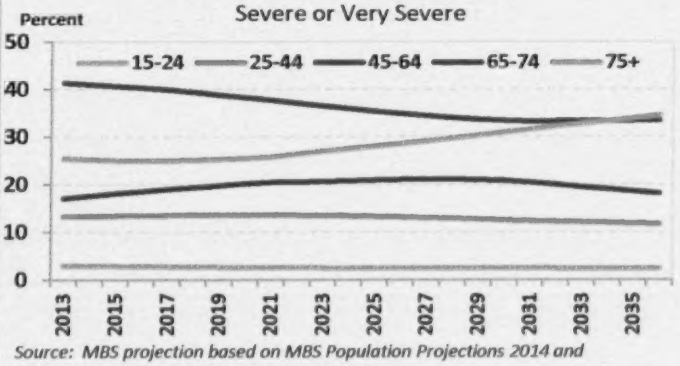
2013 to 2036



Source: MBS projection based on MBS Population Projections 2014 and Statistics Canada Canadian Survey on Disability

MANITOBA PROJECTED DISTRIBUTION OF PERSONS LIVING WITH DISABILITIES

Severe or Very Severe

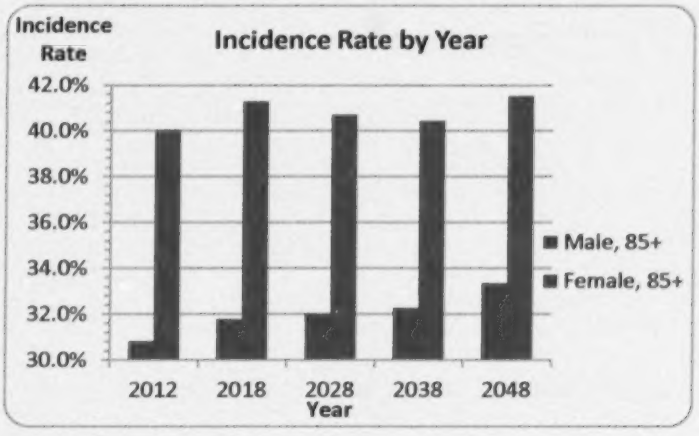


Source: MBS projection based on MBS Population Projections 2014 and Statistics Canada Canadian Survey on Disability

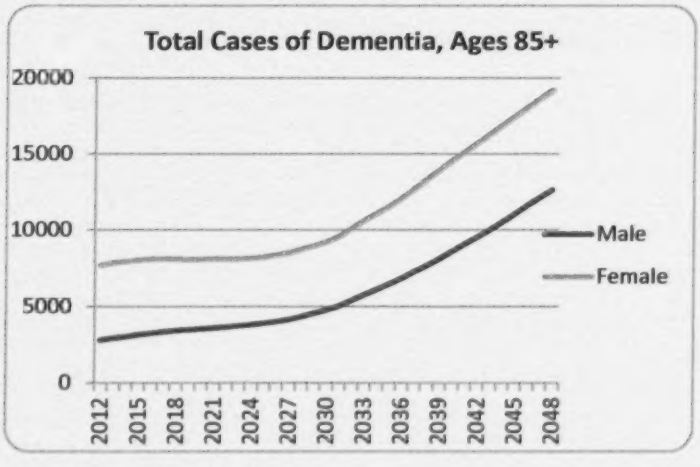
Dementia

Dementia is a devastating medical illness to both the individual and the community. The cost of care for persons suffering from a form of dementia (Alzheimer's disease being the most commonly known) is extraordinarily high, as care is progressively and necessarily more intense as the person suffering becomes less able to care for themselves in every aspect of their life. Beyond financial implications, the familial and emotional stresses from dementia extend in a wide web beyond the immediate individual suffering from the illness.

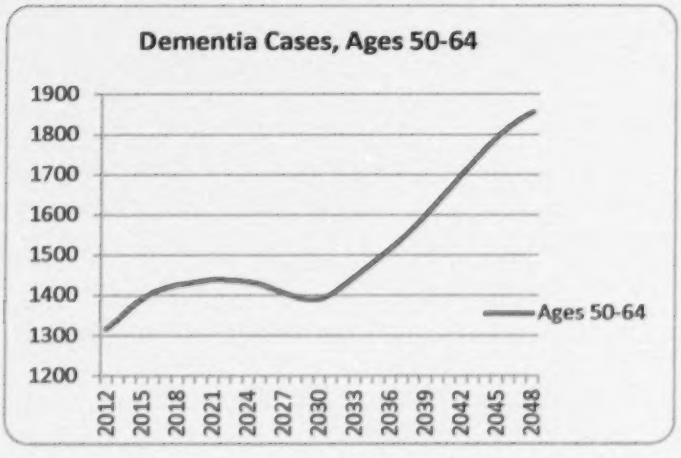
Dementia will become more prominent in Manitoba in the coming decades. Solely accounting for demographic changes, and assuming the incidence or prevalence rate remains constant in each age group, the simple fact people are living longer means there will be more cases of dementia in future. Visually represented at right, even though the prevalence rate among men aged 85 years and older grows from 30.8% to 33.4% over the period, this is solely due to projections of men living more years beyond the age of 85 years. Rates for females over this period also increase, from 40.0% to 41.5%, albeit in less linear fashion. The estimated cases of dementia coincide with shifts in the distribution of the age group population.



The total number of cases grows substantially over the timeframe estimated for persons over the age of 85. In 2012, there were an estimated 10,498 total number of cases of dementia. This is split between 2,802 cases for males and 7,697 for females. In 2048, it is projected 31,849 Manitobans will be living with dementia. In 2012, for every male over 85 with dementia, there are approximately 2.74 females with dementia. In 2048, the ratio changes to 1.52 females for each male on account of males living longer once they reach the age of 85.



The current incidence rate for persons age 80-84, the age category immediately below the above categories, is 14.3% for males and 17.3% for women. The male population is expected to grow from 10,700 to 26,800, meaning there will be an additional 2,270 males living with dementia in 2048 as compared to 2012 in this age bracket. For women, the population growth is not as dramatic (14,900 to 29,700), but will result in an additional 2,560 females living with dementia.



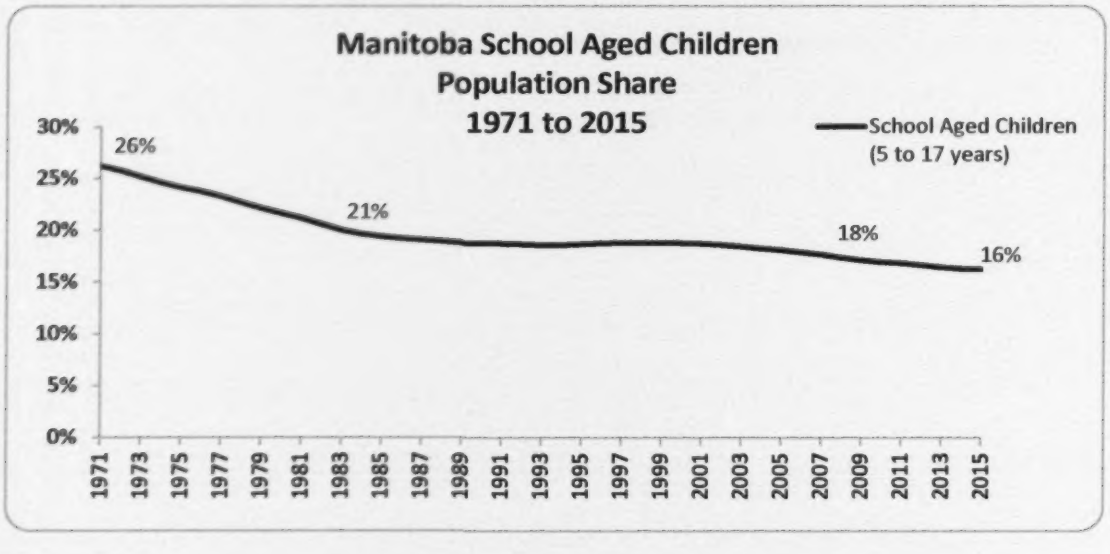
As demographic shifts and growth continue over the coming decades, the prevalence of dementia in society at large will take a firmer hold. Given that the population of Manitoba is expected to grow almost 50% to 1.87 million by 2048 (from 1.27 million in 2012), there will be more persons living with dementia from earlier years along with the associated care required. The age category from 50-64, often the time of highest income and most productive work, will see growth in dementia cases from approximately 1,300 in 2012 to about 1,850 in 2048. The compound effects of this growth, from the toll on families, the healthcare system, and other support systems, is significant – and beyond the scope of this brief analysis. However, it is incontrovertible that, without advances in treatment and prevention of dementia, extended lifespans, demographic shifts, and population growth will result in heavy demands on all aspects of society in Manitoba.

School Enrolment

The purpose of this analysis is to examine two components of school enrolment for the Province of Manitoba. Firstly, the analysis examines current and historical levels of school enrolment for Manitoba and identifies contributing factors to possible declines or increases in the school enrolment populations. The second component is to project future enrolments for school age children between five and seventeen years of age. Historical enrolment data were compiled by the Schools' Finance Branch, Manitoba Education and Advanced Learning, while future data is derived from the Manitoba Bureau of Statistics' (MBS) population projections.

Manitoba Demography and School Enrolment

From 1982 to 2007, Manitoba's population saw an increase of 13.8%, while the number of school aged children saw a decline of 2.6%. Why is that? In 1982, persons aged 5 to 17 accounted for nearly 21% of Manitoba's population, while in 2007, this share dropped to about 18%. The proportions are a far cry from 1971, when about 26% of Manitobans were of school age. As of 2014, this share is still in decline, sitting at about 16%.



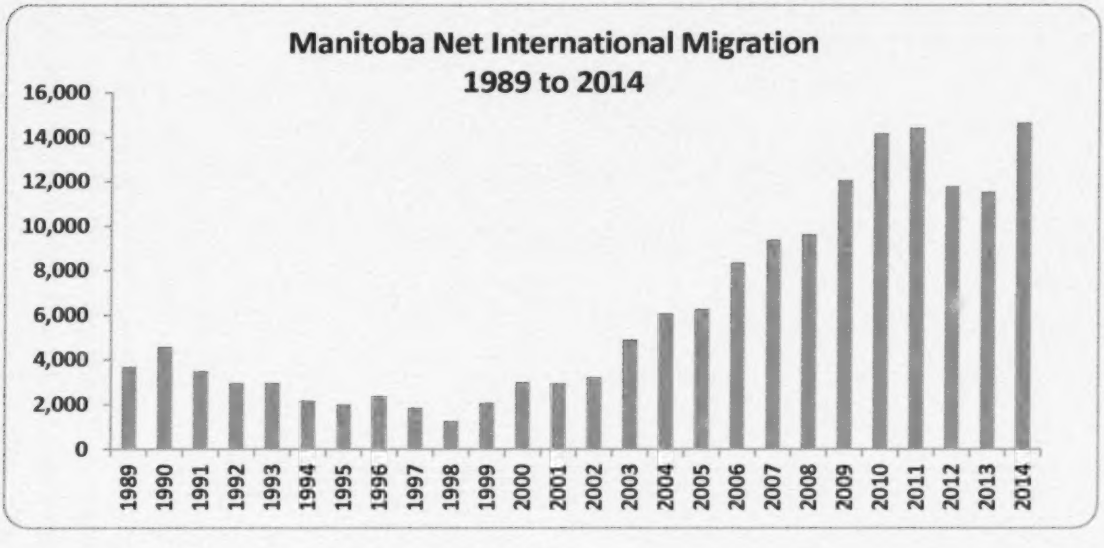
As a result of this historic decline in the population of school aged kids, total enrolment also declined from 209,874 students in 1982, to around 196,844 enrolled in 2007. This is a decrease of about 13,030 students or 6.2%. However, Manitoba's recent population growth, influenced by strong international immigration has slowly increased enrolment. In fact, since 2008, provincial enrolment numbers have increased 2.6%.

This slow and steady increase in school enrolment, in part, reflects an increasing school-age population, which Statistics Canada designates as persons 5 to 17 years of age.

Specifically, between 2008 and 2014, Manitoba's school-age population climbed to 4,227, an increase of 2.3% for the period.

Population Growth

Enrolment in Manitoba schools is increasing as a result of Manitoba's continued population growth. In 2014, Manitoba's population increased by 14,900 individuals, or 1.2% growth. Immigration continues to be the predominant factor in population growth, with Manitoba welcoming a record 16,224 immigrants during 2014. According to Statistics Canada, Manitoba's net international migration reached a record-breaking 14,643 individuals in 2014. This is an increase of 26.9% from Manitoba's 11,535 migrants in 2013.



Strong birth numbers also continue to rise, adding to the overall population growth. In fact, the number of births for Manitoba reached 16,400 over 2014 and continues an upward trend that started in 2004 and leads to a natural increase (births minus deaths) of 5,700 for 2014. With all things being equal, continued growth of provincial population levels should see a similar increase in projected enrolment for school aged children as well.

Manitoba School Enrolment

This analysis contains enrolment summaries at the provincial level by grade. Enrolment is reported on the basis of the total number of pupils attending school on September 30th of a given year. However, for the purpose of this analysis, MBS compiled the enrolment data for pupils attending school between the ages of 5 and 17 years of age. For this age group, on 30 September 2014, there were 188,750 persons enrolled in Manitoba schools, representing an increase of 1,368 pupils or 0.7% from enrolment on 30 September 2013. The tables below

illustrate changes in enrolment between 2008 and 2014 for aggregate ages. As indicated, MBS has grouped the school aged children into three categories to capture school aged children in the province including the following:

1) Elementary (ages 5 to 11)
2) Middle (ages 12 to 13)
3) Senior (ages 14 to 17)

Manitoba enrolment of school aged children, 2008 to 2014

Year	1-Elementary *(5 to 11)*	2-Middle *(12 to 13)*	3-Senior *(14 to 17)*	Total
2008	94,525	30,373	59,625	**184,523**
2009	95,172	29,575	59,790	**184,537**
2010	95,789	29,001	59,865	**184,655**
2011	97,534	29,185	59,376	**186,095**
2012	98,692	29,482	58,833	**187,007**
2013	100,028	29,352	58,002	**187,382**
2014	102,112	28,980	57,658	**188,750**

figures are as of July 1st for each year
Source: Prepared by the Manitoba Bureau of Statistics. Enrolment data compiled by the Schools' Finance Branch, Manitoba Education and Advanced Learning

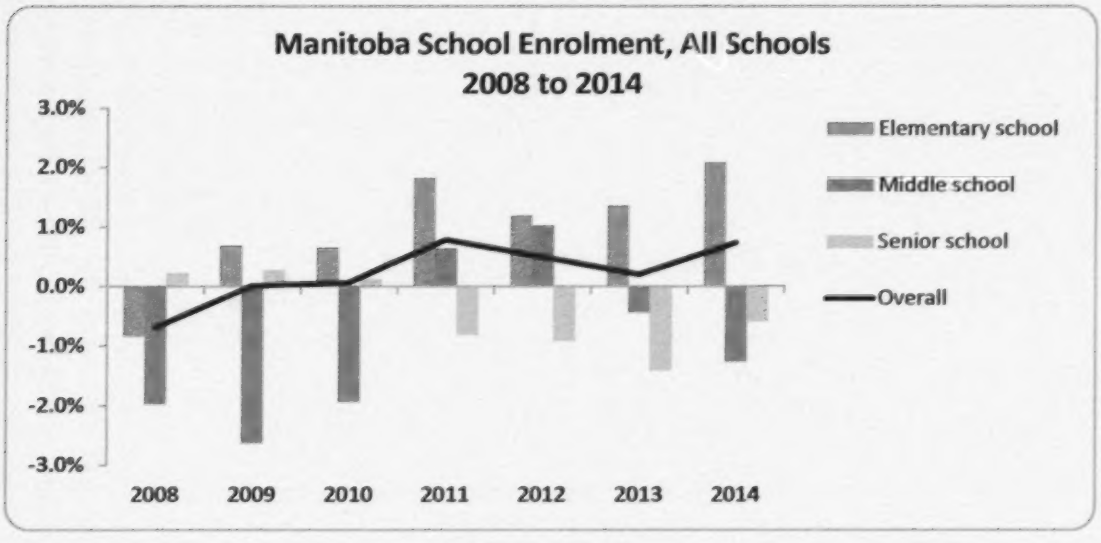
Year-over-year growth rates

Year	1-Elementary *(5 to 11)*	2-Middle *(12 to 13)*	3-Senior *(14 to 17)*	Total
2009	0.7%	-2.6%	0.3%	**0.0%**
2010	0.6%	-1.9%	0.1%	**0.1%**
2011	1.8%	0.6%	-0.8%	**0.8%**
2012	1.2%	1.0%	-0.9%	**0.5%**
2013	1.4%	-0.4%	-1.4%	**0.2%**
2014	2.1%	-1.3%	-0.6%	**0.7%**
2008 to 2014	8.0%	-4.6%	-3.3%	**2.3%**

Source: Prepared by the Manitoba Bureau of Statistics

2008 to 2014 Enrolment

As noted, population levels have increased mostly as a result of immigration and births in Manitoba. When reviewing each of the three categories of school aged children (Elementary, Middle and Senior), it is apparent where increases and declines are occurring. For example, elementary school aged enrolment has actually increased 8.0% between 2008 and 2014. This increase has added 7,587 more students to Manitoba schools and is the main contributor for the overall 2.3% growth when combining all three school categories. Middle school enrolments have declined 4.6% for this period, showing the greatest enrolment decline at 1,393 students. Furthermore, senior school enrolments recorded 59,625 pupils in 2008 and have since dropped to 57,658 in 2014, or a 3.3% decline in enrolments. Although declines have been observed in the middle and senior school enrolments, the large increase in the enrolment population for elementary schools (8.0%) will shift over the next 5 to 10 years, and improve enrolments in the middle and senior schools over the short and long term.



Projecting Future Enrolment

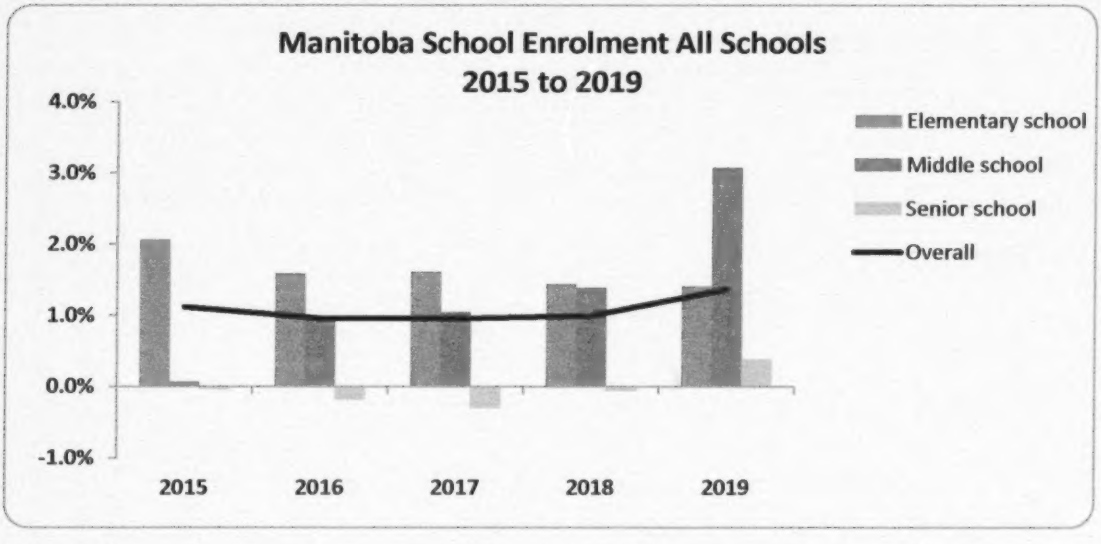
With the increasing population, it is safe to assume that Manitoba's student enrolment population for school aged children will also increase. For the purpose of this report, MBS projected the enrolment population for school aged children from 2015 to 2024, using MBS population projection (MBS 2015-3, medium scenario) and current and historical provincial enrolment data. The Manitoba school enrolment projections method combines basic enrolment ratio information with population projection values for specific age groups.

Specifically, the projection is based on Manitoba Education enrolment figures for school years 2010 through 2014, Statistics Canada population estimates for those years, and MBS school-aged population projections to 2024. An average age ratio (percent population enrolled per individual age) was calculated for individual ages, which allowed MBS to project future

enrolment values using MBS population projection assumptions from 2015 to 2024. The overall age ratio of enrolled students to individual age population was approximately 90% between 2010 and 2014.

2015 to 2019 Enrolment (Short term)

Over the next five years, Manitoba school enrolment should start to see an increase of 5.5% from 2014 levels. Elementary and Middle schools will see the most growth in enrolments, while senior schools will continue to show declines until the latter part of this period. Enrolment in



elementary schools should increase steadily over the 5 year period at an average of 1.6% per year, or 8,556 total students. Middle schools will also increase by 1,938 students or 6.7% growth from 2014. Middle schools will see its largest population increase in 2019, when enrolments are projected to increase by 3.1%. This increase is substantial when considering enrolment levels in 2014 declined 1.3%. Senior school enrolments are projected to be constant through this period, with a 0.2% decline from 2014 levels, or a drop of 104 students.

Manitoba projected enrolment of school aged children, 2015 to 2019

Year	1-Elementary *(5 to 11)*	2-Middle *(12 to 13)*	3-Senior *(14 to 17)*	Total
2015	104,219	29,001	57,638	**190,857**
2016	105,872	29,282	57,534	**192,688**
2017	107,577	29,588	57,364	**194,529**
2018	109,130	29,997	57,333	**196,461**
2019	110,668	30,918	57,554	**199,140**

Source: Prepared by the Manitoba Bureau of Statistics

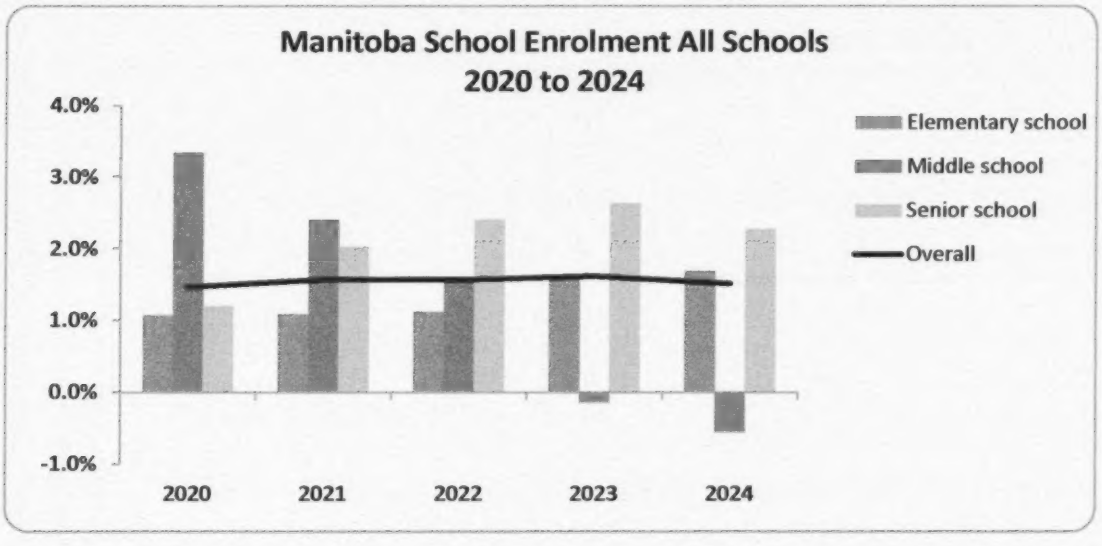
Year-over-year growth rates, 2015 to 2019

Year	1-Elementary *(5 to 11)*	2-Middle *(12 to 13)*	3-Senior *(14 to 17)*	Total
2015	2.1%	0.1%	0.0%	**1.1%**
2016	1.6%	1.0%	-0.2%	**1.0%**
2017	1.6%	1.0%	-0.3%	**1.0%**
2018	1.4%	1.4%	-0.1%	**1.0%**
2019	1.4%	3.1%	0.4%	**1.4%**
2014 to 2019	8.4%	6.7%	-0.2%	**5.5%**

Source: Prepared by the Manitoba Bureau of Statistics

2020 to 2024 Enrolment (Long term)

The long range projection for school enrolments should see a growth rate of almost fourteen percent (13.9%) between 2014 and 2024. It is expected that the total number of children enrolled between 2014 and 2024 will grow by 26,257 in the province of Manitoba. The bulk of this will be in the elementary school aged children, combining for over half (55%) of the overall



enrolment population. Elementary enrolment is projected to climb 8.4% from 2020 to 2024. Elementary enrolment between 2014 and 2024, however, is projected to increase by 17,972, or 15.7%. Middle schools will also see a large increase (13.8%) by adding 4,011 students between 2014 and 2024. Between 2020 and 2024, with an average annual growth rate of 1.3%, middle school enrolment is expected to increase by 6.7%.

Manitoba projected enrolment of school aged children, 2020 to 2024

Year	1-Elementary *(5 to 11)*	2-Middle *(12 to 13)*	3-Senior *(14 to 17)*	Total
2020	111,857	31,951	58,250	**202,058**
2021	113,078	32,717	59,431	**205,226**
2022	114,349	33,225	60,863	**208,437**
2023	116,163	33,176	62,466	**211,805**
2024	118,128	32,991	63,888	**215,007**

Source: Prepared by the Manitoba Bureau of Statistics

Year-over-year growth rates

Year	1-Elementary *(5 to 11)*	2-Middle *(12 to 13)*	3-Senior *(14 to 17)*	Total
2020	1.1%	3.3%	1.2%	**1.5%**
2021	1.1%	2.4%	2.0%	**1.6%**
2022	1.1%	1.6%	2.4%	**1.6%**
2023	1.6%	-0.1%	2.6%	**1.6%**
2024	1.7%	-0.6%	2.3%	**1.5%**
2014 to 2024	15.7%	13.8%	10.8%	**13.9%**

Source: Prepared by the Manitoba Bureau of Statistics

Summary

In summary, Manitoba's overall school enrolments will see an increase over the next ten years. This increase is based on steady population growth over the same period, which can only be sustained through strong net migration levels and a higher number of births. The overall growth for school aged children in the province of Manitoba is projected to increase by almost 14 percent, with an average year to year increase of 1.3%. Growth in the short term (2015 to 2019) will be dominated by children in the 5 to 11 year old range. This elementary school age group should continue to move through all three school aged categories, producing temporary bulges in the student population, and then level to more sustained growth in the longer term (2020 to 2024).

Crime

The Canadian Centre for Justice Statistics (CCJS), in co-operation with the policing community, collects police-reported crime statistics through the Uniform Crime Reporting Survey (UCR2). The UCR2 measures the incidence of crime in Canadian society and its characteristics.

In 2014, police services from all provinces and the territories supplied a complete year of data to the UCR2. The data from these 162 police services represented approximately 99% of the Canadian population. The dataset excludes persons with unknown age/sex and ages over 89.

Accused - A "Charged/Suspect - Chargeable" or CSC, a person identified as an accused person in an incident and against whom a charge may be laid in connection with that incident.

Charged (or charges recommended) - The police have laid information against the CSC or the police recommend to an outside source of legal authority that the CSC be officially charged.

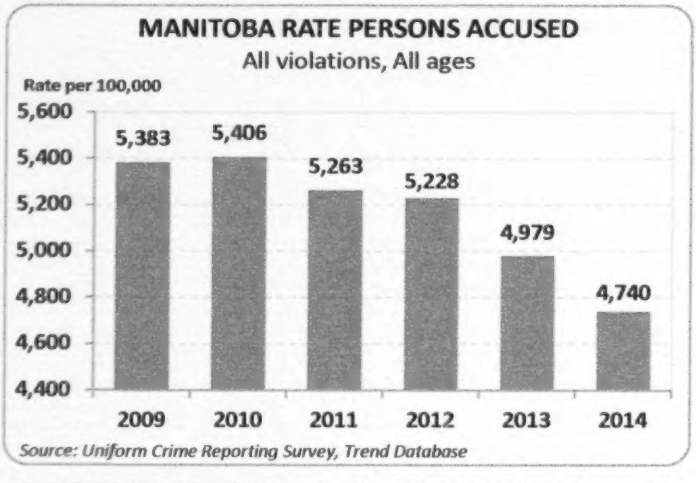
Rate of Persons Accused, 2014

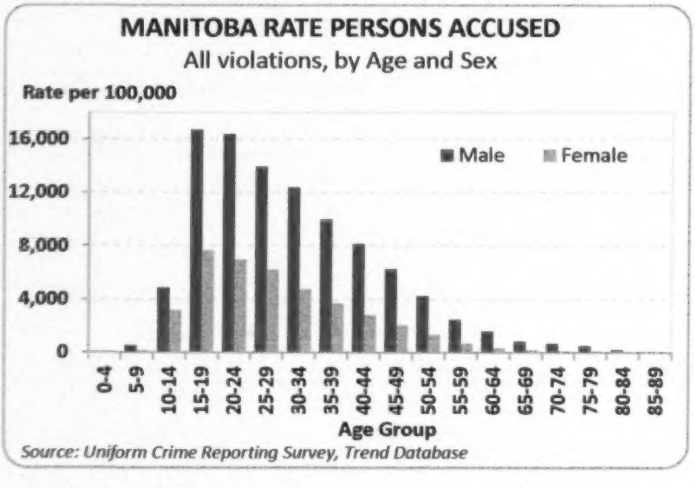
In 2014, 4,740 persons per 100,000 of population were accused of criminal code violations in Manitoba. The rate of persons accused fell from 2009 when it was 5,383 per 100,000.

In 2014, of those accused, 0.5% were under 10 years old, 22.9% were 10 to 19, 33.1% were 20 to 29, 21.6% were 30 to 39, 13.2% were 40 to 49, 6.7% were 50 to 59 and 2.1% were 60 to 89 years old. Males accounted for 71.5% of those accused.

The rate of accused Manitobans aged 15 to 19 years was 12,286, while the rate for those 85 to 89 was just 30.5. Males were more likely to be accused of a crime than females (6,792 vs. 2,693 per 100,000, respectively).

In 2014, for every 100,000 individuals, 1,272 Manitobans were accused of violent violations, down from 1,604 in 2009.





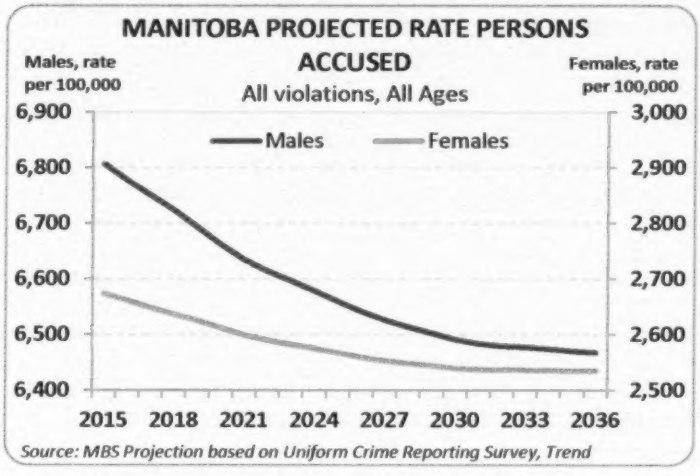
Projecting Crime Rates – Persons Accused, 2015 to 2036

To project the overall rate of persons accused from 2015 to 2036, rates of accused by age-sex cohort are held constant at 2014 levels through to 2036 and applied to MBS' population projection. Any change in the total rate is due to projected population growth and aging only.

For Manitoba, the total rate of persons accused per 100,000 decreases over the projection, from 4,740 in 2014 to 4,515 in 2036. The overall rate for males decreases by 324 persons, while the rate for females decreases by 158.

Overall, by 2036, the age distribution of those accused of a crime is not expected to change significantly from what it was in 2014.

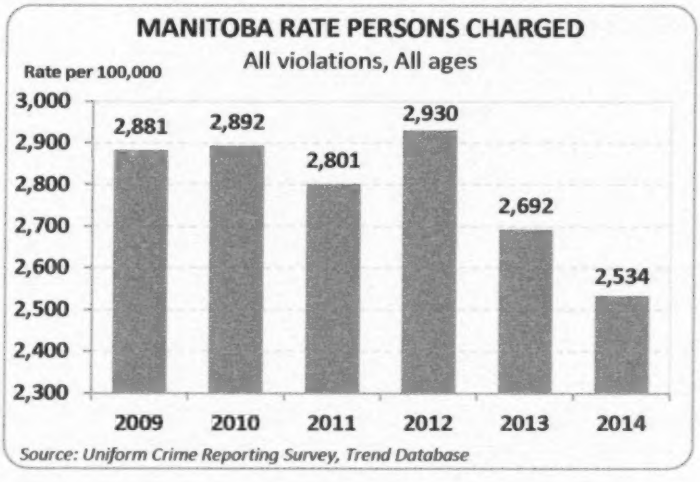
For Manitoba, the total rate of persons accused of violent crimes per 100,000 decreases over the projection, from 1,272 in 2014 to 1,215 in 2036. This would be a slight increase to the proportion of persons accused of crimes that are violent violations, from 26.8% to 26.9%.



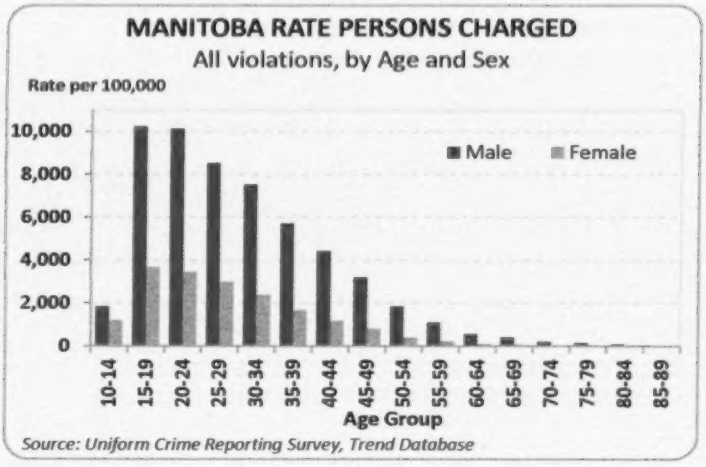
Rate of Persons Charged, 2014

In 2014, for every 100,000 individuals, 2,534 persons were charged with criminal code violations in Manitoba. The rate of persons charged has decreased in Manitoba from 2009 when it was 2,881.

In 2014, of those charged, 22.7% were 10 to 19 years old, 35.8% were



20 to 29, 22.7% were 30 to 39, 12.3% were 40 to 49, 5.1% were 50 to 59 and 1.4% were 60 to 89 years old. Males accounted for 75.8% of those charged.

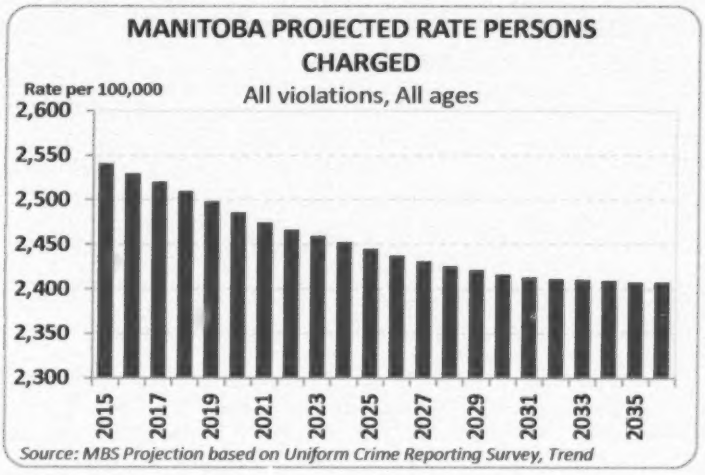


The frequency of being charged with a crime falls with age for those over 15 to 19 years of age. In 2014, the rate of Manitobans aged 15 to 19 years charged was 7,060, while the rate for those 85 to 89 was just 6.1. Males (3,848 per 100,000) were more likely to be charged with a crime than females (1,223 per 100,000). This was the case across all age groups.

In 2014, 746 persons per 100,000 of population were charged with violent violations in Manitoba. The rate of persons charged has decreased in Manitoba from 2009 when it was 948. Of Manitobans charged with a crime, 29.5% were charged with a violent violation.

Projecting Crime Rates – Persons Charged, 2015 to 2036

To project the overall rate of persons charged from 2015 to 2036, rates by age-sex cohort are held constant at 2014 levels and applied to MBS' population projection.



For Manitoba, the total rate of persons charged per 100,000 decreases over the projection, from 2,534 in 2014 to 2,407 in 2036. The overall rate for males decreases by 196 persons, while the rate for females decreases by 79.

Overall, by 2036, the age distribution of those charged with a crime is not expected to change significantly from what it was in 2014.

For Manitoba, the total rate of persons charged per 100,000 decreases over the projection, from 746 in 2014 to 712 in 2036. This would result in the proportion of persons charged with crimes that are violent violations increasing from 29.5% to 29.6%.

Traffic & Transportation Issues

The general growth of the population, nationally as well as provincially, will require increases in the transportation of goods and people, which means increased traffic of all types. This will bring more frequent flights or bigger planes (perhaps another new air terminal), also taller trains and longer buses and trucks as is already being seen. In addition, there are some profound questions to entertain about Manitoba's transportation future.

Will Manitoba host an airship company to service remote locations? With the prospect of a longer shipping season, what will be the status of the Port of Churchill in 10, 20, and 30 years from now? When will autonomous cars be common? Manitoba Public Insurance's (MPI) 2014 Annual Report specifies "Vehicles with urban autopilot could be on the road" by 2022, and by 2025 "fully autonomous vehicles could be on the road".

What changes will autonomous vehicles bring? Will there be special roads or lanes built? Of course, the expectation is that they will increase road safety; otherwise it's a road that we shouldn't go down. Will we send our kids to hockey or dance class alone with the robotic car? Will we send the same car out for a late night pizza, or will take-out service be delivered by drones like any other small parcel?

In terms of demographic change, MBS projects a 41% increase in the driving age population (16+) between 2015 and 2045, and a 20% increase in just the next 15 years. All this growth will certainly require more housing, more roads, and more cars. But of these three, the one that will lag the most is roads.

There will be new roads within new subdivisions, perhaps even in the space currently occupied by Winnipeg's North End rail yard, but not likely a great increase in roads between places. Those are largely already built. Instead we will see improvements in carrying capacity, such as more lanes, and other efficiencies like high-speed city routes, and cloverleaves replacing traffic lights (as we are already seeing). Still, with the expected increase in drivers and a corresponding increase in motor vehicles, there will on average be greater traffic density on our roads.

This may be alleviated to some extent (maybe even greatly) by significant increases in 1) public transportation 2) active transportation, and 3) e-commuting; all more affordable and more environmentally friendly practices. The projections presented here are based on today's reality.

MBS estimates the population of Manitoba aged 16 and over in 2014 was 1.04 million. According to the 2014 MPI Traffic Collision Statistics Report, this figure corresponds with 869,239 Licenced Drivers (83.5% of the 16+ population) and 1.03 million registered vehicles (1.2 vehicles per driver).

With the expectation that individuals will continue to drive at today's rates, the result is greater vehicle density on our roads; and if not for the aging of the population, this would also predict

more traffic collisions per licensed driver. But, while we project total traffic collisions to increase over the coming decades, the collision rate per driver should actually fall somewhat. And there is reason to hope it will fall faster than projected here, due to the continuing development of safer vehicles, roads, and drivers.

The traffic collision projections presented here are based only on the 2012-2014 averages (as reported by MPI) and the latest MBS population projections by age and gender.

	2012-14 Average	2015 Estimate	PROJECTION					
			2020	2025	2030	2035	2040	2045
Manitoba 16+ Population	1,027,311	1,054,420	1,118,795	1,190,176	1,262,308	1,336,905	1,411,077	1,482,569
Licensed Drivers	854,504	877,195	931,032	989,332	1,048,297	1,110,217	1,171,875	1,231,789
Total Collisions	40,488	41,458	43,606	46,069	48,611	51,436	54,268	56,993
Collisions/10,000 Drivers	473.8	472.6	468.4	465.7	463.7	463.3	463.1	462.7
Fatal Collisions	74	76	80	84	89	94	99	104
Injury Collisions	8,677	8,885	9,346	9,874	10,418	11,024	11,631	12,215
Property Damage Only	31,736	32,497	34,181	36,112	38,104	40,318	42,538	44,674
Total Fatalities	83	85	89	94	100	105	111	117
Total Serious Injuries	310	317	334	353	372	394	416	436
Total Victims	11,129	11,395	11,986	12,663	13,362	14,138	14,916	15,665

License and Collision Statistics derived from MPI Collision Statistics Reports

	PROJECTED % CHANGE FROM 2015					
	2020	2025	2030	2035	2040	2045
Manitoba 16+ Population	6.1%	12.9%	19.7%	26.8%	33.8%	40.6%
Licensed Drivers	6.1%	12.8%	19.5%	26.6%	33.6%	40.4%
Total Collisions	5.2%	11.1%	17.3%	24.1%	30.9%	37.5%
Collisions/10,000 Drivers	-0.9%	-1.5%	-1.9%	-2.0%	-2.0%	-2.1%

Total collisions are estimated to climb from the 2012-14 average of about 40,500 to 57,000 in 2045; a 40.8% increase in total collisions. MPI records collisions in terms of severity as follows:

Fatal Collision: At least one person is killed as a result of the collision, including any deaths that occur within thirty days, but excluding deaths from suicide or a medical condition.
Injury Collision: At least one person sustains some level of non-fatal personal injury.
Property Damage Only (PDO) Collision: No injuries occur; only property damage.

In the MBS projections, the number of Fatal Collisions, Injury Collisions, and PDO Collisions are kept in the same proportions as reported by MPI for 2012-14.

Fatalities are assumed to occur in 0.2% of collisions (about 2 out of every 1,000 collisions). Injuries occur in about 1 in 5 collisions (21.4%), and there are about 120 injury collisions for

every fatal collision. The vast majority of collisions (78.4%) is non-injurious and result only in property damage.

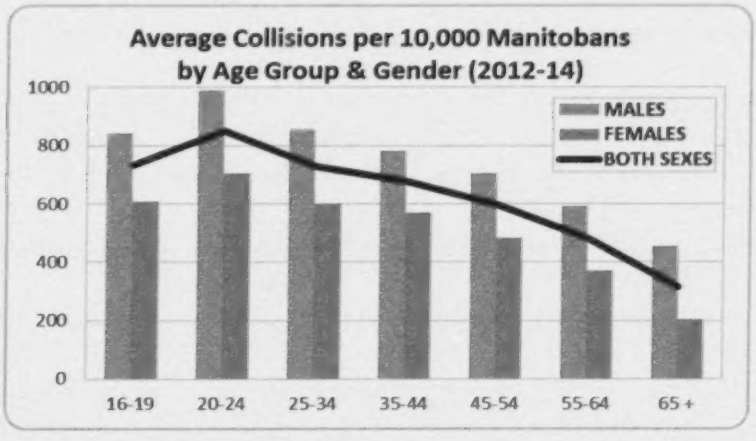
A fatal collision can have more than one fatality, and any number of injured. The average number of fatal collisions over 2012-14 was 74, which resulted in 83 deaths. Using the same ratio, the 104 fatal collisions projected for 2045 would produce 117 traffic fatalities that year.

Taking fatal and injury collisions together, MPI reported 11,129 total victims (2012-14 average), of which 310 were seriously injured and 83 killed. For 2045, the projection is 15,665 total victims, with 436 seriously injured and 117 deaths.

While total collisions is an important statistic, the collision rate by gender and age group reveals which groups are more likely to be involved in collisions.

For every age group, females have a consistently lower collision rate than males. As a rule, drivers involved in a collision are about 60% male and 40% female.

The female proportion softens a bit with age. Drivers in collisions in the 55-64 age group are 38% female and 62% male, and for ages 65+, it is 36% female and 64% male.



With the general aging of the population, and the greater life expectancy of females, the proportion of collisions with female drivers aged 65 and over (compared to males in this age group) is projected to fall from 36% today to 33% before the end of the projection period.

The chart shows the youngest age groups to have the highest collision rates. The highest collision rate is for young men aged 20-24, with an average of 990 per 10,000 population of this age group involved in a collision each year.

In explanation for the trends shown, the 20-24 age group is more likely to be licensed than those under 20 (and also more likely to have their own vehicles, and to be driving more). After the 20-24 group, each successive group has a lower incidence of collisions. This is due to both gaining driving experience, and eventually for driving less and even giving up one's license.

The following series of charts present total collisions by age group, which are expected to be 0.2% Fatal Collisions, 21.4% Injury Collisions, and 78.4% Property Damage Only Collisions.

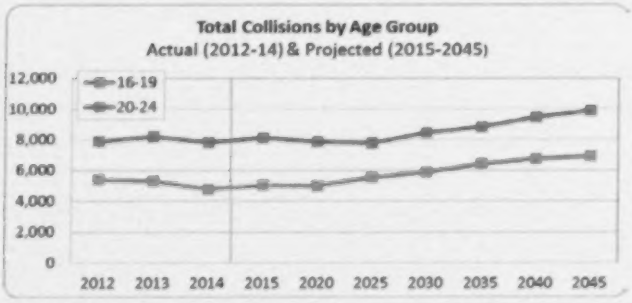
Information presented in these charts cannot be summed to arrive at the total collision figures provided earlier, as collisions can involve one, two, or more drivers of any age. However, the slopes of the lines for all three charts can be meaningfully compared because the range covered by the vertical axis is the same (i.e., 12,000).

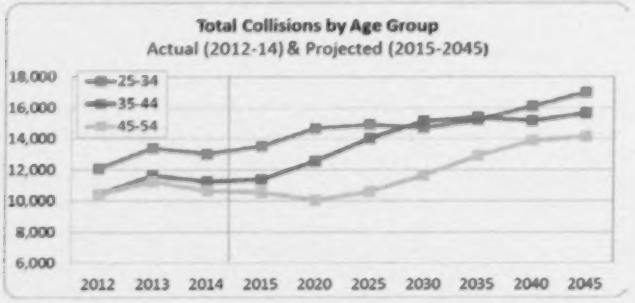
Collision involvement essentially mirrors the projected population growth of each age group (as the collision rate for each age group is assumed to be constant).

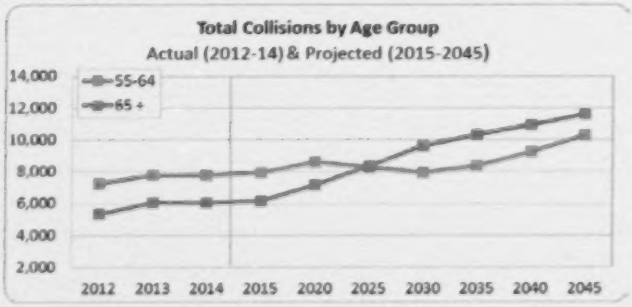
Total collisions for the 16-19 age group are projected to grow from 5,050 in 2015, to 6,930 in 2045 (37.3% in total). The 16-19 population (following a 1.3% initial decline between 2015 and 2020) grows 37.5% between 2015 and 2045.

The 20-24 age group follows a similar path, although this population declines over the first ten years of the projection period, finally recovering to 21.8% total growth by 2045; with corresponding 21.9% growth in projected collisions between 2015 and 2045.

The next three age groups are shown to have considerably more collisions each year, but this is because they are ten-year age groupings (hence about twice the number of collisions). Again, collisions are projected to grow in step with population.







For all age groups, except 65 and over, growth in total collisions (and total population) from 2015 to 2045 is between 21% and 38%. There's something different however with the 65 and over age group. For this age group, the population grows 84.2% between 2015 and 2045, and total collisions grow even more (88.4%).

In 2015, there are about 30,000 more people aged 65 and over than 55-64, but by 2045 there are almost 150,000 more people 65 and over than 55-64. As a result, for 2025 onward, the 65 and over group as a whole is projected to have more traffic collisions than those aged 55-64.

Summary of CSLS Long-Term Fiscal & Economic Projections

In July, the Centre for the Study of Living Standards (CSLS) released their report "Long-term Fiscal and Economic Projections for Canada and the Provinces and Territories, 2014-2038" (CSLS Research Report 2015-08; Authors - Don Drummond and Evan Capeluck).

In their own words, *"we present a series of alternative scenarios for long-term economic growth in Canada and the provinces and territories. The report also looks at whether provincial/ territorial governments will be able to finance public spending under these alternative fiscal and economic scenarios."*

Under the assumptions employed in this analysis, and like a number of other projections released lately, Manitoba appears to fair better than the rest of the country in general. In the CSLS analysis, projections are based on assumptions of the movement of several variables as follows:

a) population growth, specifically working age population, as provided by Statistics Canada's official population projections;
b) participation rates by age group;
c) average hours worked by age group (these first three variables are used to estimate labour input);
d) labour productivity (defined as real GDP per hours worked);
e) GDP deflation (or general price inflation);
f) level of public spending, which is both an input to the projections, as well as a target for evaluating if assumed public spending requirements can be met by the various provincial/territorial economies (without increased debt or taxation).

Due to the uncertainty that would exist in any long-term projections of this sort, the authors do not just come up with one set of assumptions, but rather put forward an expanding array of assumptions for each province/territory; a Base Case, two Alternative Scenarios which tweak public expenditure growth, and six Alternate Sensitivity Analysis Assumptions.

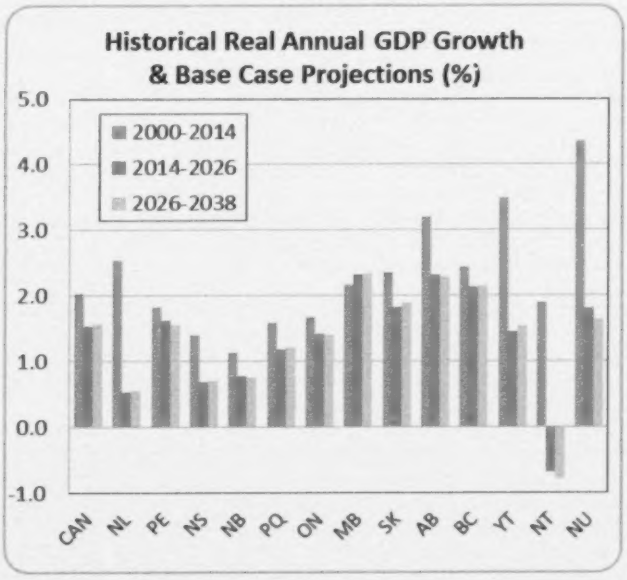
This ambitious undertaking of 21 unique scenarios produces real and nominal GDP projections for Canada as a whole and its ten provinces and three territories over two time periods; 2014-2026 and 2026-2038. The authors split the projection period in half in recognition that growth of the working age population was projected to slow considerably over time with the aging of the population.

This also gave them the ability to use slightly different assumptions for the two time periods; however this is only done for the growth in participation rates, and only for the 55+ age group.

BASE CASE ASSUMPTIONS	
Labour Productivity	Labour Productivity growth over projection period is equal to each province's annual labour productivity growth over 2000-2014.
GDP deflator (inflation)	All provinces assumed to experience annual GDP deflation of 2.0%
Working Age Population	Working Age Population for each province provided by Statistics Canada's official population projections (M1 Scenario), based on demographic trends observed over 1991-2011. At the national level this scenario projects annual working age population growth of 0.9% for 2014-2038.
Average Hours Worked	Split into three age groups, average hours worked in every province is assumed to decline at the national rate observed over 1976-2014: -0.56% per year for ages 15-24, -0.14% for ages 25-54, and -0.25% for the 55+ age group.
Participation Rates	Participation rate for ages 15-24 is assumed to decline at the national rate for 2000-2014 (-0.02%/year); the 25-54 age group is assumed to remain stable at the 2014 level for each province; for the 55+ age group participation rates increase 0.63%/year initially (2014-2026) then level to 0.37% annual growth for the second half of the projection period (2026-2038).
Public Spending	Public spending is assumed to be constant in real per capita terms, and nominally assumed to keep pace with population growth and a constant inflation rate of 2%

This first chart showing average real GDP growth for the historic period (2000-2014), and the projection period (split in half; 2014-2026 & 2026-2038), tells a couple of important stories:

1) Real economic growth for Canada and all provinces and territories, except the Northwest Territories, is shown to be positive under the Base Case Assumptions.
2) Economic growth for both halves of the projection period is slower than over the historical period for Canada and all provinces/territories except Manitoba.



One point the authors make in explaining Manitoba's relative strength going forward, has to do with growth in total hours worked.

"Between 2000-2014 and 2014-2026 ... Manitoba is the only province with an increase in the rate of change in total hours worked... [T]he slight increase in annual total hours worked growth from 0.6 per cent per year to 0.8 per cent per year (0.1 percentage point) was due to: a 0.1 percentage-point rise in annual working age population growth... and a 0.1 percentage-point

increase in annual growth in the aggregate average hours worked. The improvement in working age population growth is linked to a 0.4 percentage-point increase in the growth rate for the prime-age population (25-54)... (which has a relatively high participation rate)..."

In other words, Manitoba's economic future is projected to benefit from Manitoba's embrace of international immigration, which has lowered the median age of Manitoba and slowed the aging of the population relative to the rest of the country.

The other factor enabling Manitoba to be a growth leader is its relatively strong labour productivity growth (1.45% per year) as projected from the 2000-2014 period. Poor labour productivity growth (-0.5%) also explains Northwest Territories' failure to produce any real positive growth through the projection period. Although the authors do note: *"The projections for smaller and less diversified jurisdictions are much more uncertain than those for larger and more diversified jurisdictions."*

It is also quite uncertain however to assume the labour productivity growth realized over 2000-2014 will necessarily continue through the next 24 years for any of these jurisdictions. Twenty-four years is a long time, plus there are a number of other assumptions working behind the scenes, such as assuming that employment growth will keep pace with labour force growth over the projection period for all jurisdictions, meaning provincial unemployment rates will stay at current levels.

The report acknowledges that there is not benefit in dwelling on the Base Case Projections, as the public spending assumption is deemed quite unrealistic. For the two alternative scenarios, public spending is split into health, and non-health expenditures, with different growth assumptions.

ALTERNATE SCENARIO ASSUMPTIONS	
Alternate Scenario A	Total public spending will be constant in real per capita terms, however it is assumed the deflator for health spending will grow at the same pace as in 2000-2014 for each province (which ranges from 2.2-3.6% per year), while growth in the deflator for non-health spending remains at 2.0%.
Alternate Scenario B	More realistically, this scenario acknowledges there will be additional cost pressure on health care spending. The ageing of the population alone is expected to add 0.9% to annual health care costs over the projection period (CIHI 2014). Therefore, it is assumed health spending growth will be positive in real per capita terms, with growth in nominal per capita health spending determined by the historical growth rates for each province/territory for 2000-2014 (which ranges from 3.6%-6.1% per year).

In both cases, non-health spending is treated as for the base case above (i.e., 2% nominal per capita growth). However, it is difficult to assume that health spending will grow merely with general inflation. At the national level, health care spending has exhibited annual growth of 2.8% over 2000-2014.

National and provincial/territorial results are charted on the following page. One chart for each half of the projection period, and both charts showing the difference (in percentage points) between projected nominal GDP growth, and the level of GDP growth needed to meet the public expenditure assumption put forward for the Base Case, and Alternate Scenarios A and B.

Again, while the base case (blue) is likely quite unrealistic in terms of public spending growth, the charts show that 13 of the 14 political jurisdictions would likely produce economic growth in excess of that required to keep public expenditures constant on a real per capita basis, without additional debt or taxation. The only economy projected to fail in this regard is the Northwest Territories, due largely to its negative historical (and projected) productivity growth.

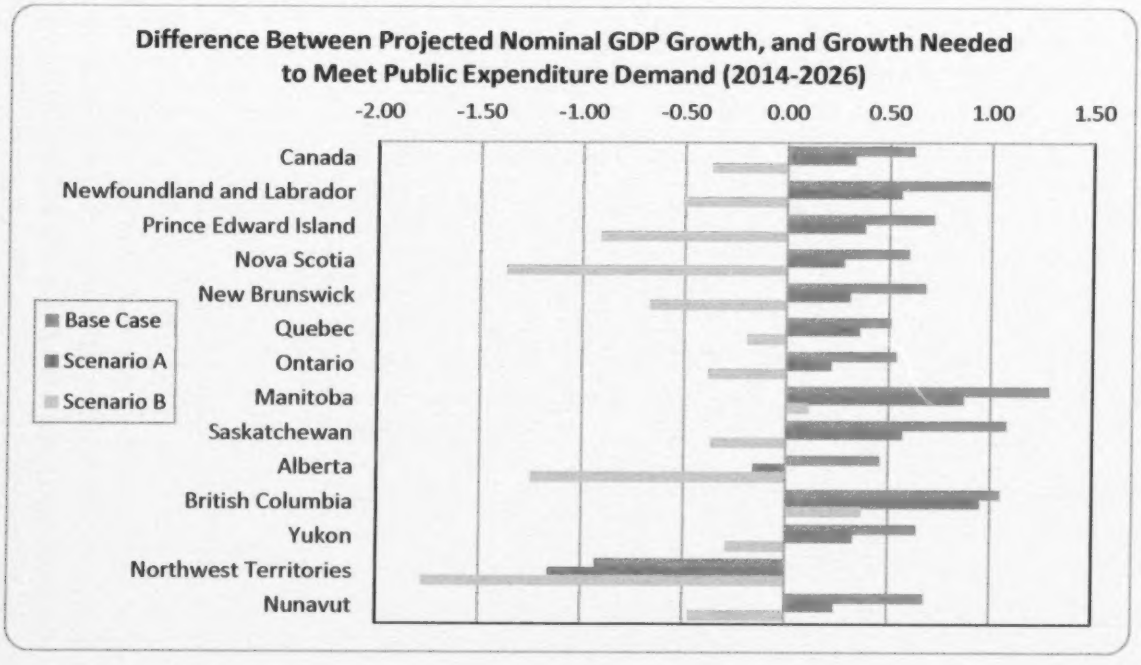
However, allowing half of government spending to grow more quickly than 2.0% results in significantly higher required growth rates for nominal GDP. In Scenario A, Alberta, as well as the Northwest Territories comes up short over both halves of the projection period.

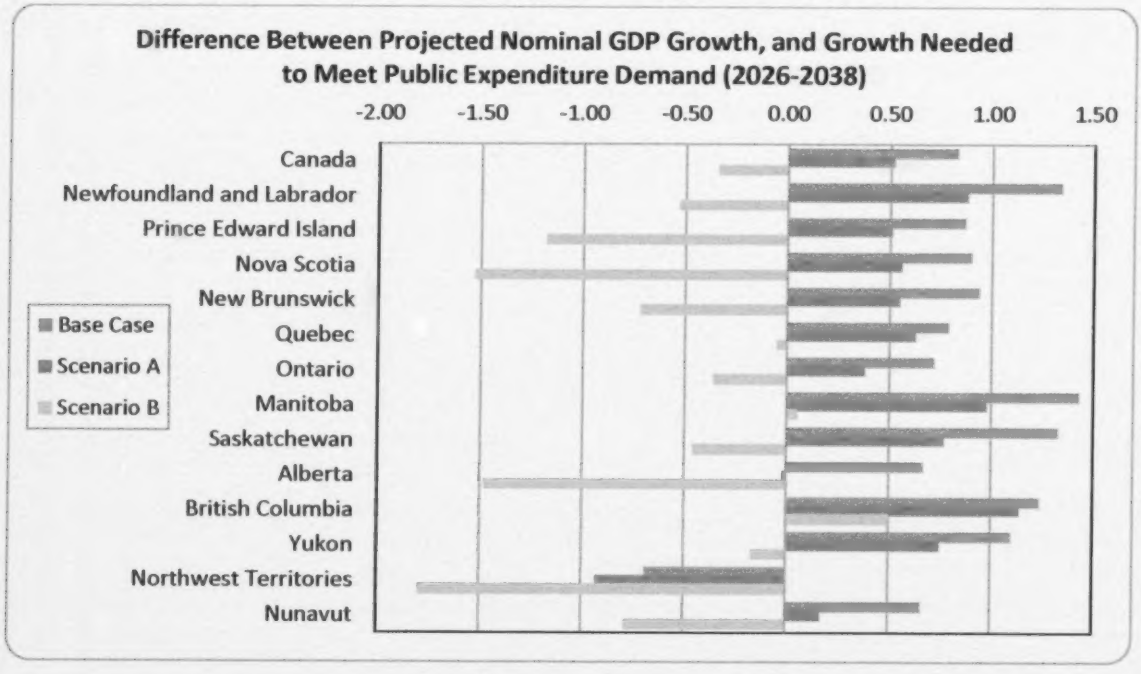
Things may not be so simple. In the case of Alberta, above-average growth in the health spending deflator (3.5%), and weak labour productivity growth (0.8%) limit growth in economic output going forward. *"However, these factors were related (either directly or indirectly) to the oil boom that took place in Alberta the 2000s... it is unlikely that these trends will be exhibited over much of the 2014-2038 period."*

"Under alternative scenario B, where health spending is allowed to grow at its average pace from the past 15 years (in nominal per capita terms), it is clear that, by and large, provincial/territorial governments will not be able to meet the test of balancing revenue growth with growth in public spending over the 2014-2038 period. In fact, under some [alternate assumption] economic scenarios, all provinces and territories will face revenue shortfalls. Only British Columbia and Manitoba have sufficient revenue growth under some of the economic scenarios."

"The relatively rosy outlooks for British Columbia and Manitoba are related to above-average labour productivity growth (1.4 and 1.5 per cent, respectively) and below-average slowdowns in labour input growth. In addition, projected growth in nominal per capita health spending for British Columbia is well below average (3.6 per cent)."

Beyond these three baseline projection scenarios, the authors explored the implications of altering some of the base assumptions, expressed here as Alternate Assumptions 1-6.


Difference Between Projected Nominal GDP Growth, and Growth Needed to Meet Public Expenditure Demand (2014-2026)
-2.00
-1.50
-1.00
-0.50
0.00
0.50
1.00
1.50
Canada
Newfoundland and Labrador
Prince Edward Island
Nova Scotia
New Brunswick
Quebec
Ontario
Manitoba
Saskatchewan
Alberta
British Columbia
Yukon
Northwest Territories
Nunavut
Base Case
Scenario A
Scenario B


Difference Between Projected Nominal GDP Growth, and Growth Needed to Meet Public Expenditure Demand (2026-2038)
-2.00
-1.50
-1.00
-0.50
0.00
0.50
1.00
1.50
Canada
Newfoundland and Labrador
Prince Edward Island
Nova Scotia
New Brunswick
Quebec
Ontario
Manitoba
Saskatchewan
Alberta
British Columbia
Yukon
Northwest Territories
Nunavut
Base Case
Scenario A
Scenario B

SENSITIVITY ANALYSIS - ALTERNATIVE ECONOMIC ASSUMPTIONS	
Alt. Assumption 1: GDP Deflator	The historical (2000-2014) GDP deflator specific to each province is used, rather than constant 2.0% annual inflation for every province.
Alt. Assumption 2: Average Hours Worked	For growth in average hours worked, a different time period is used; 2000-2014 national, instead of 1976-2014.
Alt. Assumption 3: Labour Productivity	The national labour productivity growth rate from 2000-2014 (0.99%) is used, rather than province specific rates.
Alt. Assumption 4: Working Age Population	The high-growth scenario from Statistics Canada's official population projections is used, replacing the M1 (medium) scenario.
Alt. Assumption 5: Working Age Population	The low-growth scenario from Statistics Canada's official population projections is used, replacing the M1 (medium) scenario.
Alt. Assumption 6: Average Hours Worked	Growth in average hours worked by age-group is determined by provincial history (1976-2014), rather than all provinces using the national rates for this time period.

Jurisdictions where Projected Revenue Growth is Expected to Fall Short of the Public Spending Assumption Utilized -- Results for Two Projection Periods (2014-2026 & 2026-2038), for All Projection Scenarios --

	2014-2026			2026-2038		
	Base Case	Scenario A	Scenario B	Base Case	Scenario A	Scenario B
Baseline Projections	NT	AB, NT	All except MB and BC	NT	AB, NT	All except MB and BC
Alternate Assumption 1	NT	NT	PE, NS, NB, QC, ON, YT, NT	NT	NT	PE, NS, NB, QC, ON, AB, YT, NT
Alternate Assumption 2	NT	ON, AB, NT	All except BC	NT	AB, NT, NU	All except BC
Alternate Assumption 3	None	NL	All jurisdictions	None	None	All except BC
Alternate Assumption 4	NT	NT	NL, PE, NS, NB, ON, SK, AB, NT, NU	NT	NT	NL, PE, NS, NB, SK, AB, NT, NU
Alternate Assumption 5	NT	ON, AB, NT	All jurisdictions	NT	ON, AB, NT, NU	All jurisdictions
Alternate Assumption 6	None	AB	All Provs. except MB and BC	None	None	All Provs. except MB and BC

Note: This table shows the jurisdictions for which required nominal GDP growth is expected to be greater than projected nominal GDP growth.
Source: CSLS calculations based on Statistics Canada and Canadian Institute of Health Information data.

The above summary table is a very concise presentation of the projected ability of each jurisdiction to meet (or fail to meet) a level of economic growth adequate to fund (without additional debt or taxation) the expected public expenditure requirement. Expansion on the alternate assumption details and their implications (on the following page) should help the reader navigate and make sense of the results provided above.

Alternate Assumption 1: Variable Inflation Rates

In the baseline projections, the inflation rate (defined as growth in the GDP deflator) was a constant 2.0% per year. In Alternate Assumption 1, inflation is based on provincial/territorial rates for 2000-2014. As a result, projected nominal GDP growth is lower in some provinces and higher in others.

Alternate Assumption 2: Larger Declines in Average Hours Worked

For the baseline projections, average hours worked by age group was assumed to grow at the pace exhibited nationally for 1976-2014. For Alternate Assumption 2, 2000-2014 data is used. This produced a greater decline in average hours worked for all age groups, resulting in slower labour input growth and lower projected GDP growth.

Alternate Assumption 3: Convergence in Labour Productivity Growth

Instead of historical provincial/territorial labour productivity growth rates, Alternate Assumption 3 applies the national growth rate from 2000-2014 (1.0% per year) across all jurisdictions; thus removing an important source of variability, and leaving only total hours worked to inform the labour input.

Alternate Assumption 4: High Population Growth

Instead of using Statistics Canada's medium (M1) scenario to project growth in the working age population, Alternate Assumption 4 uses the high-growth scenario. The high-growth scenario projects working age population growth of 1.2% per year between 2014 and 2038 (well above the 0.9% M1 projection). More rapid growth in working age population translates to faster growth in hours worked, and greater growth in real and nominal GDP in every province/territory.

Alternate Assumption 5: Low Population Growth

Instead of using Statistics Canada's medium (M1) scenario, Alternate Assumption 5 uses the low-growth scenario, providing 0.7% average annual growth in the working age population (compared to 0.9% in the M1 projection). Slower population growth results in reduced hours worked, with corresponding reductions in real and nominal GDP for every province/territory compared to the baseline projections.

Alternate Assumption 6: Variable Average Hours Worked

For baseline projections, every province/territory used national growth rates in average hours worked by age group (1976-2014). Alternate Assumption 6 uses provincial growth rates over the same time period to project labour force growth, adding some variability to the GDP projections.